BULLETIN OF THE SCHOOL OF EDUCATION INDIANA UNIVERSITY

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Analysis of the Proficiency in Silent Reading of 11,424 Sophomore Pupils in 243 High Schools in Indiana

Bureau of Cooperative Research and Field Service
School of Education
Indiana University, Bloomington, Indiana

HENRY LESTER SMITH, Director
MERRILL T. EATON, Assistant Director

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The current literature section of the
Education Index

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INDIANA UNIVERSITY

Analysis of the Proficiency in Silent Reading of 11,424 Sophomore Pupils in 243 High Schools in Indiana

By
HENRY LESTER SMITH
and
MERRILL T. EATON

Published by the
BUREAU OF COOPERATIVE RESEARCH AND FIELD SERVICE
Indiana University

ACKNOWLEDGMENT

AN analysis of the reading proficiency of 11,424 sophomore pupils in 243 high schools in Indiana was a cooperative project including superintendents, principals, and teachers, the State Department of Public Instruction, and Indiana University. The superintendents, principals, and teachers assumed full responsibility for the administration of the tests; the State Department of Public Instruction initiated and guided the program; and Indiana University tabulated, organized, and interpreted the scores and prepared the results for publication.

The assistance of those superintendents, principals, and teachers who participated in the measurement is gratefully acknowledged. Appreciation is also extended to the many other school people who took part in the testing program, although their pupils did not actually participate in the study.

Clement T. Malan, State Superintendent of Public Instruction, provided the full facilities of his office and staff, and much of the credit for the successful completion of the study is due to his leadership. Special consideration is extended to Wilbur Young, Assistant Superintendent of Public Instruction, who, as chairman of the State Testing Committee, very skillfully and adequately handled the details of the analysis, and to each member of his committee: Custer Baker, Superintendent of Johnson County Schools; R. H. Banks, Superintendent of Schools, Vincennes; George C. Carroll, Superintendent of Schools, Terre Haute; Ira L. Huntington, Superintendent of Jasper County Schools; Norman I. Lasher, Superintendent of Schools, Seymour; and Adrian Little, Superintendent of Huntington County Schools.

Grateful appreciation is extended to Herman B Wells, President; Herman T. Briscoe, Vice President and Dean of the Faculties; and Ward G. Biddle, Vice President and Treasurer of the University, for providing funds and facilities for processing, organizing, and interpreting the data.

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H.L.S.
M.T.E.

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Analysis of the Proficiency in Silent Reading of 11,424 Sophomore Pupils in 243 High Schools in Indiana

By

HENRY LESTER SMITH and MERRILL T. EATON

INTRODUCTION

THE purpose of this analysis is to evaluate accurately and reliably the silent reading proficiency of high school sophomores. An exact knowledge of the reading ability of each pupil is necessary if high school instruction is to be efficiently adapted to the learning ability of the pupil.

The desirable outcomes of an analysis of proficiency in silent reading are many and varied. Perhaps the most important aspect of the study is the reliable information it gives the teacher concerning the different reading skills possessed by the pupil. An exact knowledge of the level of ability of each pupil in the various skills comprising silent reading makes it possible for the teacher to organize her reading materials so that each pupil may read the kind and amount of material best adapted to his reading rate and comprehension. Intelligent guidance in the selecting of individual reading material is questionable without accurate knowledge of reading skills.

Studies have shown that there is a need for remedial work in reading from the first grade through the college and university. In one large state university the reading proficiency of about 20 per cent of the entering freshmen is so deficient that without remedial work success in the university is very doubtful. Most high schools will likely have as high a percentage of slow and inaccurate readers, and if these individuals are discovered and their deficiencies diagnosed not later than the sophomore year, much may be done to raise their level of reading ability.

Everyone recognizes the importance of effective reading. The poor reader is handicapped in whatever vocation he may select and, in addition, he is largely barred from the recreational pleasures which come from a wide and varied reading of newspapers, magazines, novels, and books of general information. The poor reader has little chance of success in the professions, and his attempt to master academic subjects leads to discouragement and the earliest possible withdrawal from school. All evidence indicates that one of the most important functions of the school is to help pupils learn to read effectively. It is a rather pathetic situation that for many individuals the highest level of reading, and often the sole reading, is the "funnies."

Proficiency in silent reading does not consist of a single skill or habit but is a pattern of many skills and habits. A pupil may be efficient in some skills and deficient in others. The deficiencies

may be simple and easily corrected or they may be complex and baffling. Often the difficulties are physical and the nurse and doctor must be called upon for assistance. Sometimes they are environmental and the parents must help. Other times they may be related to the personality and interests of the pupil, the problem being one in which all agencies of the school must cooperate.

The diagnostic measurement of reading proficiency of all the pupils, of a particular year in a high school provides the superintendent, principal, and teachers with objective information to be used in organizing the curriculum in such a way as to obtain the most efficient pupil development. Such data also enable the school to evaluate the reading proficiency of its pupils in relation to the reading ability of pupils in other schools in the city, county, state, and nation.

Schools testing below expectation (average) in reading should be stimulated to study their pupils and curriculum, and to provide whatever remedial work and curriculum changes seem advisable to raise the level of reading ability. Schools testing average and above should be encouraged to continue and improve their good work in reading. The fact that either a pupil or a class is average in reading proficiency is not necessarily a condition that the school should be proud of. To be average means that one is like most other individuals. With our modern school buildings, excellent administrative leadership, and highly trained teachers, pupils in Indiana should read above the average.

State-wide measurement of reading proficiency of high school sophomores provides information for the evaluation of the reading proficiency of all the high school sophomores in the state and gives valid and reliable data for state-wide curriculum organization. Facts concerning the level of achievement of pupils are absolutely necessary for an evaluation of a school or state program and, whether or not the findings are complimentary, they should not detract from the value of the results.

Without measurement, the school has no objective evaluation of the achievement of a pupil as compared with that of pupils of his age and grade in other schools, and it is quite possible that much of the wide variation in achievement in the different high school skills found between pupils from different schools is due to a lack of knowledge of the exact level of achievement of the pupil.

Differences in emphasis in types of reading may also be a factor in determining the level of reading as measured by standardized tests. The aims and objectives of the reading program are constantly shifting. Not many years ago the major emphasis in reading was directed toward the mechanics of oral reading. Today silent reading predominates, with the emphasis upon speed and comprehension. Pupils trained in oral reading would likely test lower than those whose training has been largely in silent reading.

Much of the value which may be derived from the data presented in this bulletin must come from a study of the test scores by the teachers who know the pupils, the school, and the community. It is hoped that the very general analysis presented in this bulletin will

encourage high school teachers to make a more detailed and comprehensive study of the reading proficiency of high school pupils.

TESTING PROCEDURES

The measurement of proficiency in silent reading of sophomore pupils, is another of the series of evaluations of pupil achievement in Indiana schools which have and are being conducted cooperatively by the State Department of Public Instruction, by superintendents, principals, supervisors, and teachers, and by Indiana University. Completed studies concerned with the evaluation of elementary and high school pupils include:

1. *A Survey of Abilities of High School Seniors in Twenty-one Counties in Indiana* (*Products of Indiana High Schools*), State of Indiana, Department of Public Instruction, Research Bulletin No. 2 Testing, Indianapolis, 1942, 46 pp.

2. *A Survey of the Language Arts Achievement of Sixth Grade Children in 18 Counties and Six Cities in Indiana* (*Products of Indiana Elementary Schools*), State of Indiana, Department of Public Instruction, Research Bulletin No. 3 Testing, Indianapolis, 1942, 75 pp.

3. *An Analysis of Factors Related to the Language Arts Achievement of Sixth Grade Pupils*, State of Indiana, Department of Public Instruction, Research Bulletin No. 8, Indianapolis, 1944, 82 pp.

4. *A Survey of the Achievement in Arithmetic of 11,348 Sixth Grade Pupils in 486 Schools in Indiana*, Bulletin of the School of Education, Indiana University, Vol. XX, No. 2, Bloomington, March, 1944, 66 pp.

5. *A Survey of the Achievement in Social Studies of 10,220 Sixth Grade Pupils in 464 Schools in Indiana*, Bulletin of the School of Education, Indiana University, Vol. XX, No. 3, Bloomington, May, 1944, 68 pp.

6. *Student Power Inventories of the Indiana High School War Program*, State of Indiana, Department of Public Instruction, Research Bulletin No. 11, Indianapolis, 1944, 137 pp.

7. *An Experiment in Measurement on a County-Wide Basis—The Daviess County, Indiana, Testing Program*, State of Indiana, Department of Public Instruction, Research Bulletin No. 12, Indianapolis, 1944, 32 pp.

8. *The Huntington County Testing Program—The Complete Measurement of All the Pupils in the Huntington County Schools*, 1944, typed.

9. *The Washington, Indiana, Testing Program—An Experiment in Educational Measurement in an Average-Sized City School System*, in process of publication by the State Department of Public Instruction.

10. *Analysis of the Proficiency in Silent Reading of 15,206 Sixth Grade Pupils in 648 Schools in Indiana.* Bulletin of the School of Education, Indiana University, Vol. XXI, No. 6, Bloomington, November, 1945.

Cooperative measurement projects now in progress or planned for the immediate future include:

An analysis of the spelling achievement of all pupils in Indiana from the second grade through the senior year in high school. Data are being processed.

A study to determine the facts a pupil should know in the various subject-matter fields before he is graduated from high school. Data are being collected.

An evaluation of the achievement in music and art of a selected sampling of elementary and high school pupils.

A study of the handwriting ability of a selected sampling of elementary school pupils.

In addition to these more extensive state-wide projects in evaluation of achievement, the State Department of Public Instruction and Indiana University have worked cooperatively with large numbers of cities, counties, and individual schools in planning and executing testing programs. The results of many of these evaluative programs are available for study and may be secured from either the State Department or the University.

The procedure followed in planning the study of proficiency in silent reading of high school sophomores was similar to that followed in organizing previous state-wide measurement programs. The State Superintendent of Public Instruction appointed a Testing Committee of representative school people,[1] which met with members of the State Department and representatives from Indiana University and planned the details of the survey.

The committee selected, as the measuring instrument, the Iowa Silent Reading Tests, New Edition, Advanced Test (Revised): Form BM.[2]

The duties and responsibilities of each group were outlined. The State Department was given the responsibility of informing city and county superintendents, high school principals, and teachers of high school sophomores concerning the measurement program and, although participation was on an optional basis, all high schools were to be encouraged to take part. Further, the State Department was to present the plan of the study at the regional meetings, listing the aims and objectives and the possible educational outcomes of the testing. It was also to provide any other facilities available in the Department which would enhance the success and value of the analysis.

The school superintendents, principals, and teachers were given full responsibility for administering the tests and sending the results to Indiana University. Administration included the securing of the tests, the giving and scoring of the tests, the recording of the results, and the providing of other desired information on special forms. These were to be forwarded to Indiana University. By far the greater amount of the work, and therefore the greater amount of credit for the success of the analysis, goes to the participating school people.

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[1] See Acknowledgment.

[2] By H. A. Greene, A. N. Jorgensen, and V. H. Kelley. Published and copyrighted by the World Book Company, New York. 1943.

Indiana University was given the responsibility of preparing detailed instructions for administering the tests and of giving training and help to those teachers who were not familiar with the administration of standardized tests. It was to prepare a special form for the transmittal of scores and other information and to score the tests for all schools desiring machine scoring. It was also to process and summarize the data, to send a copy of the summary to participating superintendents, principals, and teachers, and to organize and interpret the data in an understandable manner, preparing the complete results for publication.

This bulletin is ample evidence that each cooperating group fully carried out its respective responsibilities.

The names of the participating schools, superintendents, principals, and teachers are given in Table I. City schools are listed first, in alphabetical order. Participating township schools follow the city schools and are listed alphabetically by county. A third group of schools listed is that of special schools, which includes parochial, special, town, state laboratory, joint township, consolidated town and township, and joint town and township schools. These are also listed in alphabetical order by location. Throughout this study these schools are referred to as special schools to distinguish them from city or township schools.

TABLE I. PARTICIPATING HIGH SCHOOLS

School	Principal	Teacher
CITY SCHOOLS		
ATTICA (Clyde Cunningham, Supt.)		
Attica	Ralph Parmenter	
AURORA (H. E. Driver, Supt.)		
Aurora	Anton H. Wegener	
BATESVILLE (R. H. Prentice, Supt.)		
Batesville	E. P. Cassidy	
BERNE (E. M. Webb, Supt.)		
Berne	C. I. Hirschy	Doris Brabender
BICKNELL (Harold Axe, Supt.)		
Bicknell	Harold Axe	Marjorie Wampler
BLOOMFIELD (C. F. Henderson, Supt.)		
Bloomfield	R. F. Summers	Katheryn McKissick
BLUFFTON (L. R. Wiley, Supt.)		
Bluffton	S. M. Woodruff	
BRAZIL (C. P. Keller, Supt.)		
Brazil	G. R. Pell	Florence Earlle, Margaret Crosser, Gladys Rohrig, Kathryn Raab
BUTLER (John Paul Price, Supt.)		
Butler		Prue Oberlin
CAMPBELLSBURG (F. W. Faris, Supt.)		
Campbellsburg	F. W. Faris	Mrs. M. Johnson
CORYDON (R. B. Bulleit, Supt.)		
Corydon	John Mossler	George Merk

TABLE I. Continued

School	Principal	Teacher
CRAWFORDSVILLE (M. C. Darnall, Supt.)		
Crawfordsville	L. J. C. Freeman	Grace Maude Arthur, William Hinton Grider, Mary Mildred Schweitzer
DECATUR (Walter J. Krick, Supt.)		
Decatur	W. Guy Brown	Eloise Lewton
EAST CHICAGO (A. C. Senour, Supt.)		
Roosevelt	H. G. Lahr	Terzo Amedei, Earl Keller, Esther Carlos, Gustaf Dery, Claire Rutledge
Washington	R. F. Robinson	Cleatis Foster, H. L. Reeves, R. C. Rencenberger, John Souter, Mary Sufana, Vivian McIntosh, Louise McDonald, Nellie Mills
EAST GARY (Virgil I. Bailey, Supt.)		
Edison	F. R. Stroube	F. R. Stroube
EDINBURG (Dewey Manuel, Supt.)		
Edinburg	S. R. Rinhard	
ELWOOD (C. C. Hillis, Supt.)		
Elwood	John E. Baker	Blanche Digel
FRANKLIN (Ralph W. Sheek, Supt.)		
Franklin	L. Verne Tapp	Mayme Campbell, Lella Kelly, Esquline Coons, Louise Van Lieu
FRENCH LICK (Harvey Laughlin, Supt.)		
French Lick	A. E. Pershing	Alta Marie Claxton
GARRETT (W. S. Painter, Supt.)		
Garrett	E. V. Minniear	
GARY (Charles D. Lutz, Supt.)		
Edison	C. E. Swingley	Isabel Jankus
Emerson	Everett Spaulding	Grace Benscoter, Catherine Greenwald, Adele Tappan
Froebel	Richard Nuzum	Georgia Bopp, Margaret Southwick
Horace Mann	J. Lloyd Trump	Irene Jennings, Emma Schiess
Lew Wallace	Verna Hoke	Bernard Shirk, Wilfred James, Evelyn Parnell, Glenn Shelley
Roosevelt	H. Theo Tatum	Pauline Taylor, Ruth Battle
Tolleston	James Standley	Ann Gray, Lela Plant
William A. Wirt	John N. Ried	Irma Plum, Alice Studebaker
GAS CITY (A. J. Riefel, Supt.)		
Gas City	F. W. Hengstler	Ella Brannon
GREENCASTLE (M. E. Stapley, Supt.)		
Greencastle	William Bishop	Helen McGaughey
GREENSBURG (Carl Billings, Supt.)		
Greensburg	Paul Alexander	Mary E. Kirk, Myra Jean Hennon
GREENWOOD (Garr S. Bowman, Supt.)		
Greenwood	Vennis O. Isom	Edith Betner
GRIFFITH (G. Warren Phillips, Supt.)		
Franklin		Alletah Catt
HAMMOND (L. L. Caldwell, Supt.)		
Hammond	A. L. Spohn	Katherine Bollenbach
HOBART (Harlie Garver, Supt.)		
Hobart	Wallace Aylsworth	Helen Holman, Dorothy Teigland, Ruth Martindale, Esther R. Scott

TABLE I. Continued

School	Principal	Teacher
JONESBORO (C. H. Terrell, Supt.)		
Jonesboro	W. C. Wiley	C. H. Terrell
KENDALLVILLE (H. M. Dixon, Supt.)		
Kendallville	L. S. Brumbaugh	Thelma Eminger
LAGRANGE (Zaner Rae LeMaster, Supt.)		
Lagrange	Alvin R. Warstler	Josephine Evans
LAWRENCEBURG (H. P. Harrison, Supt.)		
Lawrenceburg	Lloyd H. Barker	
LEBANON (Thomas L. Christian, Supt.)		
Lebanon	Paul W. Neuman	
LIGONIER (O. R. Bangs, Supt.)		
Ligonier	Fred Hendrickson	Lucile Palin
MARION (Orville J. Hooker, Supt.)		
Marion	W. Fred Totten	
MARTINSVILLE (Ralph W. Dorsett, Supt.)		
Martinsville	J. B. Moore	
MISHAWAKA (P. C. Emmons, Supt.)		
Mishawaka	Frank W. Chapman	Jean Cravens
MONTICELLO (F. H. Gillespie, Supt.)		
Roosevelt	Martha Jane Risser	Martha Jane Risser
MOORESVILLE (H. F. Schulte, Supt.)		
Mooresville	H. F. Schulte	
MUNCIE (H. B. Allman, Supt.)		
Central High	Roscoe D. Schaffer	Lucille K. Mayr, Mary E. Wade, Margaret Ryan, Henryetta Brandt, Eleanor Jean Bly, Deborah Edwards, Maude Michael, Blanche C. Tuhey, Jewel Standerford
NAPPANEE (J. A. Abell, Supt.)		
Community High	Galen C. Roose	Galen C. Roose
NEW ALBANY (Charles B. McLinn, Supt.)		
New Albany	C. C. Katterjohn	
NORTH VERNON (C. E. Sandefur, Supt.)		
North Vernon	Merrill J. Webb	Joy Arbuckle
PERU (J. P. Crodian, Supt.)		
Peru	Carl Delph	
PORTLAND (D. S. Weller, Supt.)		
Portland	H. S. Brubaker	Hattie White, Helen McTurnan
ROCKPORT (Frank A. Ross, Supt.)		
Rockport	William W. Pyle	
ROCKVILLE (Claude A. Noble, Supt.)		
Rockville	S. P. Sears	Henrietta Anderson
SEYMOUR (Norman J. Lasher, Supt.)		
Shields	R. E. Michael	

TABLE I. Continued

School	Principal	Teacher
TERRE HAUTE (George C. Carroll, Supt.)		
Garfield	E. E. Hylton	Mary Hill Sankey
Gerstmeyer	Guy Stantz	Freeman D. Ketron
Wiley	W. S. Forney	Jeanette Landrum
TIPTON (D. E. Leist, Supt.)		
Tipton	C. B. Stemen	
WABASH (Owen J. Neighbors, Supt.)		
Wabash	L. H. Carpenter	Mary Biggerstaff, T. R. Tewksbury
WASHINGTON (Gerald Alexander, Supt.)		
Washington	Harry C. Wampler	
WEST TERRE HAUTE (E. G. Nicholson, Supt.)		
West Terre Haute	Alex Menestrina	
WILLIAMSPORT (O. M. Leath, Supt.)		
Williamsport	R. L. Van Scoyoc	M. H. Spore
WINAMAC (Earl D. Roudebush, Supt.)		
Winamac	Lamoin Nice	Ruth Horn
WINCHESTER (Philip M. Wesner, Supt.)		
Winchester	Dale H. Braun	Dale H. Braun
TOWNSHIP SCHOOLS		
ADAMS CO. (Lyman L. Hann, Supt.)		
Geneva	Ramon O. Hunt	
Hartford	Russell Steiner	Sybilla Sprunger
Jefferson	John H. Eberly	
Kirkland	Hugh Tate	
Monmouth	E. E. Striker	Alice Howard
Monroe	Orville Blue	Florence Lyons
Pleasant Mills	Hansel Foley	
BENTON CO. (Paul P. Sparks, Supt.)		
Otterbein	Frank Ogle	
BOONE CO. (Paul W. Nicely, Supt.)		
Advance	Harry Inskeep	Harry Inskeep
Dover	Paul J. Swank	Mrs. Harrison
Jamestown	Russell Callaway	Mrs. Hoflick
Perry Central	Sherman Minnis	Mrs. Doyal
Pinnell	Earl Poer	Mrs. Headley
Thorntown	Obert Piety	Obert Piety
Whitestown	Evertt Ebbertt	Miss Scott
Zionsville	George W. Davis	Walter Harman
CARROLL CO. (Harry Hatton, Supt.)		
Adams	Frank W. Hoehne	Mrs. Wright
Camden	Claude H. Raney	Mrs. Garver
Carrollton	C. V. McElhany	M. McCubbins
Cutler	J. G. Minniear	H. G. Lee
Deer Creek	Merle Michael	M. Michael
CASS CO. (Forrest J. Hummel, Supt.)		
Galveston	L. E. Singer	L. E. Singer
Lucerne	Clinton Smith	Florence Rhoades
Metea		Myrtle Valentine
New Waverly	Scott A. Smith	Harriet Horn
Onward	P. A. Foust	Helen Evans
Royal Center	R. W. Johnson	Ruth Johnson
Twelve Mile	E. E. Benson	Mrs. Glenora
Washington Twp.	Chalmer Condon	
Young America	George Jackson	Mrs. Yater
CLARK CO. (W. E. Wilson, Supt.)		
Henryville	Albert Dickson	Barbara Dunlevy

TABLE I. Continued

School	Principal	Teacher
CLAY CO. (Charles McKinney, Supt.)		
Ashboro	Joe Stevenson	Joe Stevenson
Coalmont	Forest W. Field	Frances Halberstadt
CLINTON CO. (Charles L. Hawkins, Supt.)		
Scircleville	Otto E. Dick	Otto E. Dick
DEARBORN CO. (Joseph R. Houston, Supt.)		
Guilford	Albert Zimmerman	Mabel Huddleston
Moores Hill	E. O. Heller	Ruth G. Portteus
DECATUR CO. (Raymond C. Moeller, Supt.)		
Burney	Collin Lewis	Collin Lewis
Clarksburg	William Logan	
Jackson	H. H. Wilson	H. H. Wilson
New Point	James Clements	Martha Morrison
Sandcreek-Letts	Carter Adams	Raymond Hern
Sandcreek-Westport		Cloe Borseth
Sandusky	Orville Pitts	
St. Paul	Alfred J. Wood	Alfred J. Wood
DEKALB CO. (Carl E. Stallman, Supt.)		
Ashley	Fred Frederick	Fred Frederick
Concord Twp. (St. Joseph)	Clyde Duker	Elsa Buckner
Spencerville	Everett Paschens	Everett Paschens
DELAWARE CO. (Merritt C. Reed, Supt.)		
Gaston	M. A. Lambert	Bessie Pinnick
FAYETTE CO. (A. E. Ewing, Supt.)		
Everton	A. D. Montgomery	A. D. Montgomery
Fairview	Russel McDonald	Iva Glunt
Harrisburg	H. G. Davis	Mrs. Starr
FOUNTAIN CO. (Ralph M. Ingersoll, Supt.)		
Hillsboro	Lewman Parke	Carol Myer
Kingman	T. R. Sutton	Irene Jones
Richland Twp.	Zaring Hudson	Edna Ruth Lane
Wallace	Edwin Mehringer	Carl Starnes
FULTON CO. (S. Earl Rouch, Supt.)		
Fulton	Everett Jester	E. E. Jester
GIBSON CO. (M. A. Massey, Supt.)		
Barton Twp. (Mackey)	C. E. Lemme	Clara Hebbeler
GRANT CO. (Fred Ratliff, Supt.)		
Swayzee	Ransom Bramblet	Mrs. Black
Sweetser	R. H. Allen	Dora Mae Patterson
Upland	J. L. Pugh	Nola Gift
Matthews	J. L. Pugh	Nola Gift
Van Buren	G. H. Hodson	K. Jones
HAMILTON CO. (John S. Hussey, Supt.)		
Walnut Grove	John Kerr	Vera J. Conway
HARRISON CO. (Baxter Redden, Supt.)		
Morgan Twp.	Robert L. Glenn	Ethel Miller
HENDRICKS CO. (Jewell H. Vaughn, Supt.)		
Amo	Theron Ogle	Theron Ogle
HOWARD CO. (Wilmer W. Lindley, Supt.)		
Greentown	C. D. Callis	Minnie A. Pearson
New London	George W. Connelly	

TABLE I. Continued

School	Principal	Teacher
HUNTINGTON CO. (Adrian Little, Supt.)		
Clear Creek	Edw. E. Glenn	Kathleen Ann O'Connor
Dallas Twp.	Lloyd Austill	Mrs. McCreary
Huntington Twp.	J. W. Crum	Walter C. Kunce
Jackson Twp.	Frank Mulligan	Paul J. Milam
Jefferson Twp.	Hugh Kariger	Hugh Kariger
Lancaster Twp.	O. W. Beitelshees	O. W. Beitelshees
Markle	Frank Owens	Frank Owens
Polk Twp.	Leslie Wilbern	Leslie Wilbern
Salamonie Twp.	Austin Smith	Miriam Redding
Union Twp.	Charles Frech	Juanita Young
Warren Twp.	Earl Bryant	Earl Bryant
Wayne Twp.	T. R. Williams	T. R. Williams
Rock Creek Center	Earl V. Williams	Marjorie Tolle
JASPER CO. (Ira L. Huntington, Supt.)		
Kankakee Twp.	Guy Dickey	
Remington	K. King Telle	K. King Telle, Mary E. Armstrong
JEFFERSON CO. (W. Howard Clashman, Supt.)		
Dupont	V. R. Hooker	Verna Stewart
JENNINGS CO. (W. H. Huelson, Supt.)		
Butlerville	George G. Ranck	James E. Acree
JOHNSON CO. (Custer Baker, Supt.)		
Center Grove	L. E. Bills	Mrs. Guiler
Clark Twp.	Harry J. Richey	H. J. Richey
Nineveh	Harold D. Hibbs	Harold D. Hibbs
Union Twp.	Clarence Harris	Rosemary Demaree
Whiteland	Otho Hogue	Glenn Ray
KNOX CO. (Lloyd A. Allen, Supt.)		
Wheatland	C. D. Wittenmeyer	Dorothy Farris
KOSCIUSKO CO. (Harry E. Lewallen, Supt.)		
Beaver Dam	Roland Ferverda	Roland Ferverda
LAGRANGE CO. (Howard W. Yoder, Supt.)		
Brighton	S. M. Caldwell	Muriel Sayles
Lima	L. L. Sayles	L. L. Sayles
Scott	William Gohl	Rufus Christner
Shipshewana	Perry J. Miller	A. W. Haglind
Springfield Twp.	W. B. Sturgis	Nan Appleman
Topeka	Wilbur Eshelman	
Wolcottville	Harry Kinsey	Kate Hoyt
LAKE CO. (Cecil A. Grayson, Supt.)		
St. John's	Charles Hunt	Abbie Hermes, Roscoe Protsman
MADISON CO. (James W. Frazier, Supt.)		
Markleville	G. R. Osborn	Mrs. Albright
MARION CO. (Harvey F. Griffey, Supt.)		
Warren Central	C. E. Eash	Josephine Spears
MARSHALL CO. (Dean E. Walker, Supt.)		
Bourbon	E. P. Smith	Clara J. Guy
La Paz	J. W. Riley	Marjorie Carothers
Tippecanoe	E. L. Smith	Grace Gregg
OWEN CO. (Thomas F. Hodges, Supt.)		
Freedom	Ben F. Yount	Ben F. Yount
Gosport	John Holden	Elizabeth Wampler
Jefferson Twp.	W. B. French	Goldie Winks
Marion Twp.	D. F. Grafe	Ola B. Chillson
Quincy	J. Clem Hammond	Jessie Street

TABLE I. Continued

School	Principal	Teacher
PARKE CO. (Paul B. Meyers, Supt.)		
Bridgeton	Jacob Hartman	Jacob Hartman
Penn Twp.	C. C. Griggs	C. C. Griggs
PORTER CO. (M. Earl Dinsmore, Supt.)		
Hebron	M. M. Hague	Margaret Mullin
Kouts	C. C. McMurtry	E. Urschel
Liberty Center	A. F. Leroy	Thelma Barber
Morgan Twp.	Bryce Houser	Evelyn Bowen
Portage Twp.	Leroy C. Hoff	Ethel Jones
Washington Twp.	N. E. Lindley	N. E. Lindley
Wheeler	Floyd O. Glass	Annabelle Shone
PULASKI CO. (Donald L. Crise, Supt.)		
Star City	D. P. Surber	
PUTNAM CO. (Frank Jarrell, Supt.)		
Cloverdale	Loren Wilson	Mildred Bastin
RANDOLPH CO. (Glen O. Chenoweth, Supt.)		
Jackson	Harry Epply	Victoria Lawrence
Lincoln	Howard M. Hill	Mrs. Paul J. Deeming
McKinley	J. R. Clark	Ruth Lesley
Wayne Twp.	Leon Thompson	Edna Agnew
RIPLEY CO. (Leo Harris, Supt.)		
New Marion	Curtis B. Michael	C. B. Michael
RUSH CO. (Charles M. DeMunbrun, Supt.)		
Mays	John Goode	
Milroy	William B. Ward	Emma T. Richey
New Salem	Ary Skillman	Marion Frakes
Ripley Twp.	J. A. Reynolds	J. A. Reynolds
ST. JOSEPH CO. (Otto J. Newman, Supt.)		
Lakeville	Oscar Valentine	Cecil Keiser
Madison Twp.	Wayne Eikenberry	
SCOTT CO. (Clinton H. Gamble, Supt.)		
Austin	Harry Hounchell	Helen Alvis
Lexington	Leland Langdon	Marjorie Middleton
STARKE CO. (Earl E. Young, Supt.)		
San Pierre	Ralph Richardson	Grace Jones
Oregon Twp.	W. H. Rogers	W. H. Rogers
STEUBEN CO. (Willis R. Roberts, Supt.)		
Freemont	Paul Bailey	Joyce Reed
TIPTON CO. (Florence McReynolds, Supt.)		
Goldsmith	Robert Smith	Frances Mitzenberg
Windfall	Samuel Brewer	Charlotte Barr
UNION CO. (William N. McMahan, Supt.)		
Harrison Twp.	C. E. Lineback	
VERMILLION CO. (Fred Hayes, Supt.)		
Dana	W. M. Beanblossom	Mrs. Kerus
Cayuga	Otto Albright	Otto Albright
Hillsdale	Edwin Wolpert	Edwin Wolpert
Newport	J. C. Pickell	Lloyd C. Bingham
Perrysville	Will Meyers	C. Keith
St. Bernice	H. B. Hays	H. B. Hays
VIGO CO. (Clarence Pound, Supt.)		
Concannon	James Ray	Ralph Davidson
Fayette	C. R. Liggett	Mable Miller

TABLE I. Continued

School	Principal	Teacher
WABASH CO. (Clarence Vandegrift, Supt.)		
La Fontaine	M. B. Little	Eva Hubbard
Linlawn	C. A. Smith	Jane Keller
Roann	John Frederick	Roselyn Fox
Waltz	R. J. Minnick	Bruce Abernathy
WARREN CO. (Luther B. Mann, Supt.)		
West Lebanon	J. E. Stewart	Helen L. Pugh
WASHINGTON CO. (Arthur Fisher, Supt.)		
Little York	Roy Beldon	
SPECIAL SCHOOLS		
BLOOMINGTON (H. E. Binford, Supt.)		
University	Harold Moore	
BROOK (H. L. Stafford, Supt.)		
Brook-Iroquois Twp.	H. L. Stafford	
CARLISLE (P. R. Cromwell, Supt.)		
Carlisle-Haddon Twp.	H. W. Gross	Iloe Little
DECATUR (Rev. J. J. Seimetz, Supt.)		
Decatur Catholic	Sr. M. Fidelis	Sr. M. Albertonia
DELPHI (Lee Eve, Supt.)		
Delphi-Deer Creek Twp.	C. A. Smith	
HUNTINGTON (Rev. T. E. Dillon, Supt.)		
Huntington Catholic	Sr. M. Evodine	Sr. Mary Austin
LIBERTY (Ernest McGraw, Supt.)		
Short	Kenneth M. Cleveland	
INDIANAPOLIS (Rev. John Casey, Diocesan Supt.)		
Sacred Heart	Sr. Aurelia Mary	Sr. M. Alphonsa
St. Agnes	Sr. Francis Joseph Sr. Mary Geraldine	Sr. Isabel
St. John Academy	Sr. Clotilde Flaherty	Sr. Louise Clare, Sr. Robert Kiley
St. Mary Academy	Sr. Mary Magdalen Wirmel	Sr. M. Henry, Sr. Francis Romaine
KNIGHTSTOWN (Russell S. Merkel, Supt.)		
Morton Memorial	Russell S. Merkel	Lillian Poston
LOOGOOTEE (L. M. Haigerty, Supt.)		
St. John	Sr. Edna Marie	Sr. Elizabeth Mary
MIDDLETOWN (C. R. Young, Supt.)		
Middletown	C. S. Sutton	Mary M. Rust
MILLTOWN (Orin Flinn, Supt.)		
Milltown and Whiskey Run Twp.	Ollie T. Bosse	Elizabeth Hancock
MONTPELIER (H. G. Morgan, Supt.)		
Montpelier-Harrison Twp.	M. A. Wilson	Lillie Albertson
OWEN CO. (Thomas F. Hodges, Supt.)		
Morgan-Jackson	Edgar Porter	Edgar Porter
MUNCIE (H. B. Allman, Supt.)		
Burris Laboratory	Earl A. Johnson	Ruth Oxrieder

TABLE I. Continued

School	Principal	Teacher
OAKLAND CITY (Waldo J. Wood, Supt.)		
Oakland City-Columbia Twp. Cons.	Marlin E. Kell	Herman Cloin
ORLEANS TWP. (L. L. Laughlin, Supt.)		
Orleans and Orleans Twp. Cons.	A. O. Carnes	Audra Qualkinbush
STARKE CO. (Earl E. Young, Supt.)		
Hamlet-Davis Twp.	Donald Peregrine	——— Weathers
TERRE HAUTE (George C. Carroll, Supt.)		
Laboratory	Olis G. Jamison	Gypsy Wilson
TIPTON (D. E. Leist, Supt.)		
St. Joseph's Academy	Sr. M. Madonna Walsh	Sr. M. Madonna Walsh
WATERLOO (C. A. Overmeyer, Supt.)		
Waterloo-Grant Twp.	Alvin J. Smith	

The 11,424 high school sophomores included in this study should constitute an adequate sampling, since they make up about 25 per cent of the high school sophomore enrollment in the state. The schools participating in the evaluation are well distributed over the state, as may be seen by examining Figure 1. The three types of high schools, city, township, and special, are well represented. Scores were received for 7,232 sophomores enrolled in 66 city schools, 3,257 pupils enrolled in 153 township schools, and 935 pupils enrolled in 24 special schools, making a total of 11,424 sophomores enrolled in 243 different high schools.

As soon as the participating schools scored their tests and entered their data on the record forms, they mailed the forms to Indiana University for processing. The record sheets were carefully inspected and, if there was any question concerning the data, a letter was addressed to the school in question asking for the desired information. The data were then coded, the results punched on Hollerith cards, and the cards processed. Throughout this study, schools are referred to by code number and not by name. Each participating school has been informed of its code number and has received a summary of the results of the study throughout the state.

ANALYSIS OF RESULTS

The Iowa Silent Reading Tests, New Edition, Advanced Test (Revised): Form BM was given to 11,424 sophomore pupils enrolled in 243 high schools well distributed over Indiana. Of the 243 high schools, 66 were city schools including 7,232 sophomores, 153 were township schools with 3,257 sophomores, and 24 were special schools with 935

sophomores. The tests were given during the first semester of the school year 1944-45.

The Iowa Silent Reading Tests are in a 16-page booklet and include seven separate tests: (1) rate and comprehension, (2) directed reading, (3) poetry comprehension, (4) word meaning, (5) sentence meaning, (6) paragraph comprehension, and (7) use of index and selection of key words. Test 1 is divided into two parts, Test 1R, rate, and Test 1C, comprehension, with a separate score for each part. Test 7 is also divided into two parts, Test 7A, use of index, and Test 7B, selection of key words, with a separate score for each part. Thus,

Fig. 1. Location of Schools Which Participated in the Study

since two of the tests are divided, the Iowa Silent Reading Tests include nine subtests with a raw score which is translated into a standard score, and a corresponding percentile for each test. The standard score and corresponding centile for the total test is determined by computing the median standard score for the nine separate tests.[3] Standard scores and corresponding percentiles are comparable for the nine tests. Standard scores are given in the test booklet and corresponding centiles are given in the manual of directions. The percentile norm for sophomores on the total test and on each of the subtests is 50.

Master sheets were prepared which included the number of boys, girls, and all pupils tested, and the total test score, corresponding centile, and quartile distribution for each of the 243 schools on the total test and the nine subtests. The average reading proficiency of a group is not always a good measure of the group because a few pupils testing exceptionally high or exceptionally low will change the average to such an extent that it is not representative of the group. However, when the average group centile is considered in connection with the distribution of the pupils within the group, a fair and accurate evaluation of the group may be made. The quartile distribution is an acceptable technique for showing the spread of individuals within a group and is especially applicable when centiles are used. The data were organized by school according to the type of school—city, township, and special. The total number of items on the master sheet for each school for the total test and the nine subtests is 210, not including the code number of the school. For the 243 schools, there are 46,830 entries in all, inclusive of the code numbers of the schools. Although these data are very interesting and deserve careful study, the wartime restrictions on paper make their complete publication at this time impossible. Typewritten tables of the complete data are available, however, and will be provided to any individual or group interested in a further study of the results. All participating schools have received a complete set of the data for their own pupils, including a report of the reading proficiency of the pupils from each of the three types of schools.

Data Concerning Individual Schools—The complete data for nine schools, including three city, three township, and three special schools, are given in Table II. There is nothing unusual about the data for these schools except that one school from each of the three types scored high, one average, and one low. Many other schools scoring equally high or low could have been selected, but the schools selected serve as an illustration of the data available for each group tested and may be used to demonstrate methods of interpretation and possible utilization of the results.

The data for city school 14408 appear first in Table II. The 19 sophomore boys tested in school 14408 have a total test score of 168, with a corresponding percentile of 57. Three of the 19 boys are in

[3] The term "score" in this study refers to standard score, since the findings of the study are based on standard scores. Also, the terms "total test score" and "total test centile" are used to refer to the total test median score and the total test median centile.

TABLE II. TOTAL TEST SCORES, CORRESPONDING CENTILES, AND QUARTILE DISTRIBUTION OF BOYS, GIRLS, AND ALL PUPILS IN THREE CITY, THREE TOWNSHIP, AND THREE SPECIAL SCHOOLS ON THE TOTAL TEST AND ON EACH OF THE NINE SUBTESTS

Test	Boys							Girls							Total						
	No.	M	%ile	Quartile Distribution				No.	M	%ile	Quartile Distribution				No.	M	%ile	Quartile Distribution			
				1-25	26-50	51-75	76-100				1-25	26-50	51-75	76-100				1-25	26-50	51-75	76-100
CITY SCHOOLS																					
School 14400																					
Rate	19	172	59	4	5	3	7	23	163	43	4	11	6	2	42	167	51	8	16	9	9
Comprehension	19	165	45	4	6	3	4	23	166	45	6	8	4	7	42	166	46	10	14	7	11
Directed Reading	19	170	57	6	3	4	6	23	166	49	4	9	7	3	42	168	53	10	12	11	9
Poetry Comprehension	19	173	63	2	5	7	7	23	163	44	6	8	6	3	42	167	53	8	13	13	8
Word Meaning	19	165	49	4	6	7	2	23	159	37	8	4	9	2	42	162	43	12	10	15	5
Sentence Meaning	19	162	44	4	6	5	4	23	166	51	7	6	3	7	42	164	47	13	11	7	11
Paragraph Comprehension	19	162	45	7	6	3	3	23	156	36	8	6	5	4	42	160	39	15	12	8	7
Selection of Key Words	19	173	66	0	3	5	11	23	173	66	2	4	8	9	42	173	65	2	7	13	20
Use of Index	19	165	48	5	6	4	4	23	171	60	4	3	6	10	42	169	56	9	9	10	14
Total Test	19	168	57	3	6	4	6	23	166	48	5	6	7	5	42	166	51	8	12	11	11
School 15201																					
Rate	115	184	80	8	10	20	75	141	185	82	4	17	28	91	254	185	82	12	27	48	166
Comprehension	115	176	71	9	19	28	47	141	173	66	20	31	41	49	254	174	68	29	50	69	96
Directed Reading	115	182	81	27	20	16	30	141	183	67	26	45	28	22	254	183	43	53	65	44	92
Poetry Comprehension	115	171	61	21	19	21	30	141	173	63	24	37	19	60	254	173	63	45	56	40	113
Word Meaning	115	179	78	9	17	33	29	141	178	71	12	29	48	51	254	178	73	21	46	80	121
Sentence Meaning	115	163	46	47	15	9	42	141	180	79	63	19	25	34	254	170	63	110	34	37	73
Paragraph Comprehension	115	177	71	9	23	25	48	141	178	73	9	34	50	48	254	161	41	110	34	39	71
Selection of Key Words	115	179	76	14	18	20	41	141	178	74	12	25	31	73	254	178	74	16	27	73	108
Use of Index	115	174	66	10	16	24	38	141	180	75	12	19	57	73	254	178	74	24	43	81	106
Total Test	115	176	72	7	16	26	36	141	179	71	8	32	43	58	254	177	71	30	35	61	128
															254	178	72	15	47	72	114
School 16701																					
Rate	231	164	45	66	56	64	47	266	163	43	57	69	62	44	497	163	43	123	127	130	87
Comprehension	231	158	33	89	67	43	32	266	153	25	134	65	48	19	497	156	28	223	132	91	51
Directed Reading	231	161	39	109	45	9	8	266	148	14	205	37	19	5	497	154	22	314	82	24	77
Poetry Comprehension	231	151	25	124	59	28	20	266	148	16	180	50	25	11	497	144	12	304	109	53	31
Word Meaning	231	150	19	135	45	31	21	266	149	19	180	73	37	6	497	149	16	315	118	68	16
Sentence Meaning	231	152	27	80	66	53	32	266	161	41	83	68	55	46	497	160	39	163	134	108	92
Paragraph Comprehension	231	146	20	97	70	32	34	266	152	25	140	77	30	19	497	148	18	237	147	62	51
Selection of Key Words	231	154	25	117	50	32	32	266	156	28	106	107	31	22	497	155	27	223	157	63	54
Use of Index	231	164	41	76	54	15	9	266	148	19	171	61	21	13	497	145	16	344	85	21	47
Total Test	231	158	19	131	46	37	17	266	153	19	146	72	35	13	497	153	19	278	119	72	28
TOWNSHIP SCHOOLS																					
School 01701																					
Rate	9	184	65	2	4	0	3	13	165	47	4	5	3	1	22	164	45	6	7	5	4
Comprehension	9	175	49	2	1	2	4	13	159	36	4	6	0	3	22	166	40	6	7	2	7
Directed Reading	9	160	75	1	1	2	5	13	175	65	2	4	1	6	22	177	69	3	5	3	11
Poetry Comprehension	9	166	81	1	1	2	5	13	173	63	0	7	3	3	22	170	59	3	8	5	6
Word Meaning	9	162	45	3	2	0	4	13	167	53	4	5	2	2	22	166	37	7	7	2	6
Sentence Meaning	9	171	61	1	1	4	3	13	167	53	4	5	3	4	22	169	57	5	6	7	4
Paragraph Comprehension	9	164	46	3	1	3	2	13	163	44	5	4	2	2	22	163	44	8	5	5	4
Selection of Key Words	9	173	65	1	0	2	4	13	166	49	3	3	2	5	22	169	56	4	3	4	9
Use of Index	9	169	56	2	1	3	3	13	167	52	3	4	1	5	22	168	54	5	5	4	8
Total Test	9	169	60	2	0	2	3	13	168	48	3	4	2	3	22	166	51	7	4	5	6
School 01607																					
Rate	7	158	34	2	1	2	0	7	161	39	2	2	2	0	14	160	37	4	3	5	0
Comprehension	7	160	37	2	2	2	0	7	163	42	2	1	2	2	14	162	40	4	3	4	3
Directed Reading	7	199	94	0	0	1	6	7	196	88	0	0	1	6	14	197	90	0	0	2	12
Poetry Comprehension	7	181	66	0	1	2	4	7	177	60	2	0	2	3	14	179	62	2	1	4	7
Word Meaning	7	179	75	0	1	2	4	7	173	67	2	0	2	3	14	176	72	2	1	4	7
Sentence Meaning	7	170	59	1	0	3	3	7	190	89	0	0	2	5	14	183	81	1	0	5	8
Paragraph Comprehension	7	182	77	0	1	2	4	7	188	81	0	0	2	5	14	190	77	1	0	4	9
Selection of Key Words	7	184	45	1	2	2	1	7	180	19	0	0	1	4	14	183	91	1	2	3	8
Use of Index	7	177	71	0	2	2	3	7	185	81	0	0	2	4	14	197	80	0	2	4	8
Total Test	7	177	75	0	1	4	2	7	179	79	0	1	2	4	14	181	78	0	2	5	7
															14	178	77	0	2	5	6
School 08001																					
Rate	8	148	10	8	0	0	0	4	138	1	4	0	0	0	9	109	1	8	0	0	0
Comprehension	8	140	9	4	0	1	0	4	143	9	3	0	0	0	9	140	9	8	0	1	0
Directed Reading	8	149	17	8	0	0	0	4	144	12	3	0	0	0	9	147	13	8	0	1	0
Poetry Comprehension	8	143	14	8	0	0	0	4	138	9	4	0	0	0	9	139	11	7	2	0	0
Word Meaning	8	149	18	8	0	0	0	4	153	15	3	1	0	0	9	142	10	7	2	0	0
Sentence Meaning	8	158	31	8	0	0	0	4	145	11	3	1	0	0	9	142	10	7	2	0	0
Paragraph Comprehension	8	147	15	8	0	0	0	4	136	7	4	0	0	0	9	130	7	8	0	0	0
Selection of Key Words	8	161	39	8	0	0	0	4	157	20	3	1	0	0	9	143	10	7	2	0	0
Use of Index	8	152	28	8	0	0	0	4	148	17	3	1	0	0	9	142	10	7	2	0	0
Total Test	8	148	10	8	0	0	0	4	138	1	4	0	0	0	9	130	21	8	1	0	0
															9	143	5	9	0	0	0
SPECIAL SCHOOLS																					
School 06007																					
Rate	8	178	77	0	0	0	8	8	183	48	4	0	1	3	10	178	70	2	0	2	6
Comprehension	8	178	73	0	0	1	7	8	158	30	2	2	1	5	10	160	37	2	2	2	4
Directed Reading	8	172	61	0	0	1	7	8	172	47	2	1	1	4	10	167	51	3	3	2	2
Poetry Comprehension	8	179	72	0	0	1	7	8	165	44	3	2	1	2	10	166	51	3	3	2	2
Word Meaning	8	179	75	0	0	1	7	8	180	58	4	1	2	1	10	163	45	4	1	4	1
Sentence Meaning	8	187	7	0	0	0	8	8	187	77	2	0	1	5	10	191	71	0	1	3	6
Paragraph Comprehension	8	173	64	0	0	1	7	8	189	57	2	2	2	2	10	182	63	2	3	4	3
Selection of Key Words	8	179	70	0	0	0	8	8	179	74	2	0	1	5	10	178	69	2	2	3	3
Use of Index	8	201	95	0	0	0	8	8	179	74	0	2	1	4	10	183	79	0	2	1	6
Total Test	8	178	77	0	0	0	8	8	183	48	4	0	1	3	10	178	51	4	0	1	5
School 13302																					
Rate	11	182	54	1	5	3	2	20	189	54	5	4	5	6	31	189	54	6	9	8	8
Comprehension	11	172	44	1	3	5	2	20	166	40	4	8	4	4	31	168	54	5	9	9	8
Directed Reading	11	180	69	0	0	3	8	20	181	57	2	2	6	10	31	181	57	2	2	9	18
Poetry Comprehension	11	164	47	3	4	1	3	20	167	53	5	6	4	5	31	166	51	8	10	5	8
Word Meaning	11	182	56	1	3	3	3	20	172	65	3	2	9	6	31	170	60	4	5	12	9
Sentence Meaning	11	178	63	1	3	4	3	20	182	71	3	2	4	11	31	179	70	4	5	8	14
Paragraph Comprehension	11	186	72	0	0	3	1	20	187	53	4	11	1	4	31	186	72	4	11	4	12
Selection of Key Words	11	186	68	0	2	2	4	20	186	49	3	7	2	8	31	187	82	3	9	4	15
Use of Index	11	179	74	0	0	4	4	20	180	75	4	1	1	14	31	180	75	4	1	5	21
Total Test	11	173	64	1	2	1	4	20	171	64	3	4	2	8	31	171	64	4	2	3	12
School 08804																					
Rate	37	181	30	13	11	7	6	31	184	45	7	12	8	4	68	182	41	20	23	15	10
Comprehension	37	154	24	17	12	6	3	31	153	20	18	10	7	1	68	155	22	35	22	13	4
Directed Reading	37	150	19	20	11	5	1	31	159	30	11	9	9	2	68	154	26	31	20	14	3
Poetry Comprehension	37	149	19	21	9	5	4	31	159	37	15	7	7	2	68	154	28	36	16	12	4
Word Meaning	37	158	25	18	12	4	3	31	162	43	7	12	12	0	68	157	33	25	24	16	3
Sentence Meaning	37	166	31	13	11	11	2	31	161	44	10	8	7	6	68	159	37	23	19	17	9
Paragraph Comprehension	37	154	28	15	12	6	4	31	158	38	14	6	4	7	68	156	32	29	18	9	12
Selection of Key Words	37	161	30	9	14	7	5	31	165	47	5	14	8	4	68	163	43	14	28	15	11
Use of Index	37	154	29	15	13	6	3	31	164	48	7	9	8	7	68	158	38	22	22	14	10
Total Test	37	156	24	16	13	6	2	31	160	34	13	7	9	2	68	157	27	29	20	14	5

the lowest quartile (1-25), 6 in the second (26-50), 4 in the third (51-75), and 6 in the fourth (76-100). The total test score for the 23 girls is 165, with a corresponding centile of 48. Five girls test in the first quartile, 6 in the second, 7 in the third, and 5 in the fourth. The total test score for the 42 boys and girls is 166, with a corresponding centile of 51, or just 1 centile above normal. Eight of the group test in the first quartile, 12 in the second, 11 in the third, and 11 in the fourth. As a group, the boys test 9 centiles higher than the girls. The 3 boys and 5 girls testing in the first quartile are as deficient in reading as the 6 boys and 5 girls testing in the fourth quartile are superior readers, in relation to average sophomore reading proficiency. The remainder of the group (10 boys and 13 girls) may be considered as average readers.

The most valuable data, as well as the most interesting, are the scores made on the nine subtests. A group may score average, below, or above on the total test and yet test high on some of the subtests and low on others. A study of subtest scores shows individual and group strengths and weaknesses. A study of subtest score indicates the aspects of silent reading which are being overemphasized by the teachers as well as those which are not being emphasized enough. The subtest scores provide information relative to the need for a remedial reading program and may also show the need for enrichment materials. A wealth of information for general vocational and educational guidance is provided by the subtest scores. The centiles for the boys on the subtests range from a low of 43 in paragraph comprehension to a high of 65 in the selection of key words. This range is not unusual. There is no evidence of any marked group weaknesses nor of overemphasis on any of the aspects of silent reading measured.

The centiles for the girls range from a low of 35 in paragraph meaning to a high of 65 in the selection of key words. The centiles show no evidence of overemphasis, but the centiles of 35 in the selection of key words and 37 in word meaning are low enough that the English teachers in school 14408 should make some investigation of the matter.

The subtest centiles for the entire group of 42 sophomores show no marked weaknesses or evidences of overemphasis in any of the reading skills. The group is weakest (39) in paragraph comprehension and strongest (65) in the selection of key words. The fact that this group tests near expectancy on the total test and on all the subtests does not in any sense mean that all 42 pupils are average or better readers. As was pointed out earlier, at least 8 pupils are definitely poor readers and 11 pupils are superior. The available data do not include the reasons why some of these pupils are poor readers and others are superior. This is a problem for investigation by the faculty of school 14408. The scores give the relative reading proficiency of each student on the total test and on the subtests, but they do not show why he tests high or low.

School 15201 is an illustration of a city group testing high; the 113 boys have a total test score of 176, with a corresponding centile of 73. Seven boys test in the first quartile, 15 in the second, 35 in the

third, and 56 in the fourth. The 141 girls have a total test score of 175, with a corresponding centile of 71. Eight of the girls test in the first quartile, 32 in the second, 43 in the third, and 58 in the fourth. The boys test slightly higher than the girls. The total group of 254 sophomores have a total test score of 176, with a corresponding centile of 73. Fifteen test in the first quartile, 47 in the second, 78 in the third, and 114 in the fourth. Although as a group the 254 sophomores from school 15201 test quite high, 7 of the boys and 8 of the girls are definitely poor readers.

As may be expected from the high total test score, both boys and girls test high on the subtests. On only two of the subtests, directed reading (43) and sentence meaning (41), does the group test below the norm. The data indicate that these pupils have had good instruction in all the aspects of silent reading tested.

The 497 sophomores from city school 18701 test well below expectation on the total test and on the subtests. The total test centile of 19 for the group is 31 centiles below the test norm. Even though the group as a whole tests low, 30 of the pupils are superior readers, 276 are poor readers, and 119 may be considered average, as measured by the total test centile.

There are no marked differences between the centiles for boys and girls on the subtests, but there are significant differences between the subtest centiles for the group. The group centile for rate is 43, which is close to expectation, but on comprehension the centile is only 28, which is 22 centiles below the norm. The centile 12, for directed reading, is extremely low. The group is poor in poetry comprehension, with a centile of 23, and still lower in word meaning, with a centile of 18. The group does much better in sentence meaning, testing in the 39th centile. The centiles for paragraph comprehension (26) and selection of key words (27) are both low. The group shows little proficiency in the use of index, testing in the 16th centile, 34 centiles below the test norm.

The data for city school 18701 indicate that the 497 sophomores tested are woefully poor readers. Further, the subtest scores indicate that instruction has been neglected in a number of the basic skills included in the pattern of silent reading. The group does not test up to expectation on any of the subtests, so there is no evidence of overemphasis on any of the aspects of silent reading tested. There is little that is complimentary that can be said about the reading proficiency of this group. It would seem either that the majority of these pupils have had a number of years of poor reading instruction or that, as a group, they are slow learners. Surely the faculty of school 18701 needs to investigate both the elementary and high school reading program, looking toward a more efficient method of reading instruction.

The 22 sophomores in township school 01701 test just above the test norm on the total test. The boys test higher than the girls on the total test and on most of the subtests. Subtest centiles for the group range from a high of 69 on directed reading to a low of 37 on word meaning. The rather wide differences in subtest scores indicates

that certain phases of silent reading have not received sufficient emphasis. Seven of the 22 pupils are definitely poor readers, 9 may be considered average, and 6 are superior readers.

The 14 students in township school 01607 test very high, attaining a total test centile of 77, which is 27 centiles above the test norm. On three of the subtests, rate (37), comprehension (40), and selection of key words (30), the group tests relatively low. These scores indicate a need for greater emphasis on these subtests. None of the pupils test in the lowest quartile on the total test, which indicates there are no poor readers in the group. Eight of the 14 may be considered average, and 6 may be considered superior readers.

The 9 sophomores from township school 08001 test very low on the total test and on all of the subtests. The group centile (5) is 45 centiles below average sophomore reading proficiency. There is every reason to believe that the reading program has been and is poor, since all tested aspects of silent reading are deficient. It is almost certain that the students do not read well enough to learn the usual content courses of the sophomore year successfully and that, without remedial reading and special emphasis on reading proficiency, these pupils will acquire little content material during the remainder of their high school days. The fact that all 9 of the group fall into the first quartile on the total test shows that there is not a pupil in the group who reads as well as an average sophomore is expected to read.

The 10 sophomores in special school 06007 as a group test just above average on the total test. The most interesting feature of the scores for these pupils is the great variation in proficiency on the subtests. In rate of reading, the group has a centile of 70 and, in use of index, a centile of 79, yet in comprehension they drop to 37 and, in sentence meaning, to 21. The centiles for directed reading (51), poetry comprehension (51), word meaning (45), paragraph comprehension (43), and selection of key words (59) are not far from expectation.

These data clearly indicate an overemphasis on some aspects of silent reading and a neglect of others. This does not mean that less time and emphasis should necessarily be given to those aspects in which the group tests high, but that enough time and effort should be given to those areas in which the group tests low so that there will be group efficiency in all phases of silent reading. Four of the 10 sophomores are poor readers, as measured by the total tests, 1 is average, and 5 are superior.

The 31 sophomores in special school 13102 as a group test well above expectation, attaining a centile of 64 on the total tests. The group centiles are approximately average in rate, comprehension, poetry comprehension, and selection of key words; well above average in directed reading, word meaning, sentence meaning, and use of index; and well below the test norm in paragraph comprehension. As a group, these sophomores are superior readers, their only tested weakness being in paragraph comprehension. Individually, only 4 of the group may be considered poor readers, 15 average readers, and 12

superior readers, as compared with average sophomore reading proficiency.

The 37 sophomore boys in special school 00804 test considerably lower than the 31 girls. As a group, these students are poor readers, attaining a centile of 27 on the total test. The subtest centiles do not show any overemphasis, as the test norm was not attained on any of the subtests, but the low centiles indicate poor instruction in many aspects of silent reading.

Twenty-nine of the 68 sophomores test in the first quartile and may be considered poor readers, 34 test in the second and third quartiles and are average readers, and 5 test in the fourth quartile and are superior readers, as compared with average sophomore reading proficiency.

The interpretation of the data for the three city, three township, and three special schools listed in Table II must not be taken as final and complete. As has been explained, test scores show how the excellency of reading of an individual or of a group compares with general sophomore reading proficiency, but test scores do not give the reasons why an individual or a group tests low, average, or high. Much additional information is needed to determine reasons for level of reading proficiency. The high school faculty has this information available or is in a position to secure what facts are needed concerning the individual and his environment to make an adequate diagnosis of weakness or strength in reading proficiency.

There are no absolute standards that may be used in comparing an individual's reading test scores to determine definitely whether he is a poor, average, or superior reader. Test norms are based on the average performance of the standardizing group and are therefore relative rather than absolute.

Group Reading Proficiency—A study of the group reading proficiency of the sophomores, as measured by the total test scores, provides interesting data for analysis. The total test scores and corresponding centiles, and the quartile distributions for boys and girls and for the total group tested in each of the three types of schools are given in Table III. The data for city schools appear first in the table, followed by those for township schools and for special schools.

The median centile constitutes the total test score and is determined by arranging the nine subtest scores from highest to lowest and using the middle score. The corresponding centiles for the median scores are obtained from the manual of directions for the test. Total test median scores and corresponding centiles for groups are computed in the same way as the total test score is computed for one individual.

The total test centile range for the 66 groups of sophomore boys enrolled in city schools (Table III) varies from a low of 8 (school 13501) to a high of 73 (school 15201). Differences in reading proficiency between different groups of sophomore boys are almost as great as those found between individual boys within a group. According to the quartile distribution of scores made by boys testing lowest, 7 of the 8 boys test in the first quartile and the other 1 in the second

quartile. The reading proficiency of this group of boys is so low that it is unlikely that they will be able to master the content courses required of high school sophomores. The quartile distribution of the group of boys testing highest is quite different from that of the group testing lowest. In the highest group, only 7 of the 113 boys test in the lowest quartile, and approximately half of the group, 56, tests in the fourth quartile and may be considered superior readers as measured by average sophomore reading proficiency. The other 50 boys in the group test in the middle two quartiles and may be considered average readers. These 50 boys are probably above average in sophomore reading proficiency, as 35 of the 50 test in the third quartile.

When the total test centiles of the 66 groups of sophomore students enrolled in city high schools are compared with the total test norm (50), 43 groups, or 65 per cent, test below the norm and 23 groups, or 35 per cent, test above the norm.

The total test centile range for sophomore girls enrolled in city schools varies from a low of 19 (schools 16801 and 18701) to a high of 77 (school 14404). While the centile for girls is not as low as that for boys, it is far below expectation. In school 16801, 7 of the 14 girls test in the first quartile and 7 in the second, and in school 18701, more than half of the 266 girls test in the first quartile. Only 5 of the 76 girls in the school testing highest are in the lowest quartile, 30 are in the middle two quartiles, and 41 are in the fourth quartile.

The number of city schools in which sophomore girls test below and above the test norm is similar to that for boys. Forty-two, or 64 per cent, of the groups of girls test below the test norm and 24 groups, or 36 per cent, test above the norm.

The total test centile range for the 66 city high schools (including both boys and girls) varies from a low of 19 (schools 18701 and 23101) to a high of 73 (school 15201). The two groups with a total test centile of 19 are 31 centiles below expectation, while the group with a total test centile of 73 is 23 centiles above the test norm. The difference of 54 centiles between the two groups is indeed a wide difference. It is undoubtedly true that there are many factors affecting the reading proficiency of sophomore students, yet surely the wide differences in reading ability found between groups are due to some extent to the methods of teaching reading and, in the case of the low ability reading groups, to lack of emphasis on fundamental reading skills. Of the 66 groups of high school sophomores tested in city schools, 43, or 65 per cent, test below the norm and 23, or 35 per cent, test above the norm.

The total test centile range for the 153 groups of sophomore boys enrolled in township schools varies from a low of 1 (school 01602) to a high of 81 (school 00603). All 8 of the boys in school 01602 test in the first quartile. Four of the 6 boys in school 00603 test in the fourth quartile and may be considered superior readers, and the other two are average readers, testing in the second quartile. Of the 153 groups of sophomore boys tested in the township schools,

TABLE III. NUMBER OF PUPILS, TOTAL TEST SCORES AND CORRESPONDING CENTILES, AND QUARTILE DISTRIBUTION OF TOTAL TEST SCORES FOR BOYS, GIRLS, AND TOTAL GROUP IN EACH OF THE SCHOOLS TESTED

School	Boys							Girls							Total						
	No.	M	%ile	Quartile Distribution				No.	M	%ile	Quartile Distribution				No.	M	%ile	Quartile Distribution			
				1-25	26-50	51-75	76-100				1-25	26-50	51-75	76-100				1-25	26-50	51-75	76-100
CITY SCHOOLS																					
10501	18	169	60	2	5	6	5	40	159	32	16	12	6	6	58	162	40	18	17	12	11
10701	40	161	37	17	7	11	5	49	162	40	18	13	9	9	89	161	37	35	20	20	14
10801	35	167	54	9	9	7	10	33	170	62	2	12	9	10	68	168	57	11	21	16	20
11101	30	167	54	5	12	6	7	19	164	45	4	9	1	5	49	166	51	9	21	7	12
11201	26	150	12	15	9	2	0	33	158	29	15	10	4	4	59	154	21	30	19	6	4
11301	27	162	42	8	9	5	5	21	159	32	8	9	4	0	48	162	40	16	18	9	5
11501	50	160	34	20	16	7	7	57	161	37	18	17	15	7	107	161	37	38	33	22	14
11701	39	160	34	18	5	10	6	67	165	48	14	23	20	10	106	163	42	32	28	30	16
11901	18	164	45	4	7	4	3	28	164	45	5	9	12	2	46	164	45	9	16	16	5
12101	11	167	54	2	4	4	1	14	164	45	4	4	4	2	25	165	48	6	8	8	3
12801	36	159	32	16	9	9	2	24	163	42	8	6	6	4	60	161	37	24	15	15	6
12901	59	156	51	20	11	9	19	70	168	57	17	15	17	21	129	167	54	37	26	26	40
13101	41	165	48	10	12	13	6	46	166	51	11	9	18	8	87	165	48	21	21	31	14
13301	84	158	29	38	22	15	9	85	160	34	35	24	14	12	169	159	32	73	46	29	21
13302	146	153	19	85	43	11	7	153	155	24	79	39	25	10	299	154	21	164	82	36	17
13401	21	174	89	9	6	6	9	19	176	73	0	3	8	8	40	173	88	0	9	14	17
13501	8	146	8	7	1	0	0	9	163	42	4	1	1	3	17	155	24	11	2	1	3
13701	35	159	29	29	11	18	7	56	164	45	16	20	10	10	121	161	37	45	31	28	17
14101	45	165	48	14	8	14	9	41	163	42	12	12	9	8	86	164	45	26	20	23	17
14201	25	156	26	12	6	2	3	29	164	45	8	9	6	6	54	160	34	20	17	8	9
14301	33	165	48	10	8	8	7	27	169	60	2	10	6	9	60	167	54	12	18	14	16
14401	34	160	34	10	15	5	3	39	162	40	11	15	10	3	73	161	37	21	31	15	6
14402	86	169	70	11	27	22	26	84	165	48	18	25	23	18	170	167	54	29	52	45	44
14403	98	167	54	12	32	30	16	136	163	42	35	45	40	16	234	165	48	47	83	70	34
14404	78	172	86	9	20	20	29	76	178	77	5	11	19	41	154	175	71	14	31	39	70
14405	88	167	54	12	17	22	17	99	168	57	17	32	26	24	187	168	57	29	49	48	41
14406	35	156	26	18	10	5	2	83	154	21	34	15	9	5	98	155	24	52	25	14	7
14407	29	161	37	9	8	9	3	41	165	48	7	18	11	5	70	163	42	16	26	20	8
14408	19	168	57	3	6	4	6	23	165	48	5	6	7	5	42	166	51	8	12	11	11
14501	20	160	34	6	9	2	3	23	159	32	8	9	5	1	43	160	34	14	18	7	4
14701	49	157	37	23	11	8	7	62	158	29	28	12	14	8	111	158	29	51	23	22	15
14901	30	165	48	7	11	8	4	36	166	51	9	9	12	6	66	165	48	16	20	20	10
15001	12	158	29	6	3	2	1	17	170	62	3	5	3	6	29	165	48	9	8	5	7
15101	41	170	62	8	9	10	14	54	176	75	1	12	16	25	95	174	69	9	21	26	39
15201	113	176	73	7	15	35	56	141	175	71	8	32	43	58	254	176	73	15	47	78	114

15401	54	187	54	10	17	16	11	61	170	62	9	13	22	17	115	169	60	19	30	38	28
16101	17	157	27	9	3	4	1	18	161	37	8	2	5	3	35	159	32	17	5	9	4
16201	32	170	62	7	5	6	14	61	168	57	12	12	21	16	93	169	60	19	17	27	30
16801	9	157	27	4	5	0	0	14	153	19	7	7	0	0	23	155	24	11	12	0	0
17001	39	170	62	5	10	10	14	48	170	62	4	14	17	13	97	170	62	9	24	27	27
17101	26	165	48	9	5	5	7	38	167	54	3	14	13	8	84	166	51	12	19	18	15
17201	12	159	32	5	3	2	2	10	158	29	4	4	2	0	22	159	32	9	7	4	2
17701	106	167	54	23	27	25	31	121	168	57	24	32	29	36	227	167	54	47	59	54	67
17801	108	158	29	47	28	21	12	100	160	34	31	35	24	10	208	159	32	78	63	45	22
18101	141	166	51	24	49	41	27	188	170	62	26	43	84	55	329	168	57	50	92	105	82
18301	20	166	51	5	7	4	4	35	168	57	8	10	5	12	55	167	54	13	17	9	16
18501	18	155	24	9	8	0	2	26	169	60	4	7	6	9	44	164	45	12	15	6	11
18701	231	153	19	131	46	37	17	288	153	19	145	73	35	13	497	153	19	276	119	72	30
18801	26	162	40	8	9	5	4	22	165	48	5	8	4	5	48	164	45	13	17	9	9
19901	153	161	37	60	41	27	25	196	163	43	54	61	54	27	349	162	40	114	102	81	52
19301	17	170	62	1	5	6	5	26	174	69	1	4	9	12	43	172	66	2	9	15	17
19701	97	167	54	19	26	25	27	103	173	68	12	22	28	41	200	170	62	31	48	53	68
20001	36	160	34	13	11	7	5	64	163	42	19	21	15	11	100	162	40	32	32	20	16
20701	27	158	26	13	9	4	1	35	160	34	13	9	10	3	62	158	29	26	18	14	4
20801	17	163	42	6	3	4	4	13	164	45	2	5	3	3	30	163	42	8	8	7	7
21101	67	162	40	22	26	8	11	67	163	42	18	18	22	9	134	163	42	40	44	30	20
21901	48	166	51	11	12	18	7	82	169	60	14	16	28	24	130	168	57	25	28	46	31
21902	147	155	24	78	39	23	7	89	156	26	43	22	19	5	236	155	24	121	61	42	12
21903	116	166	51	33	25	27	31	148	169	60	23	35	46	44	264	167	54	56	60	73	75
22001	50	164	45	14	16	10	10	51	167	54	8	14	17	12	101	166	51	22	30	27	22
22601	43	161	37	17	14	5	7	38	165	48	12	8	8	10	81	163	42	29	22	13	17
22801	52	158	29	23	19	13	3	91	159	32	37	22	20	12	149	159	32	60	41	33	15
23101	22	151	14	14	4	3	1	25	155	24	13	7	4	1	47	153	19	27	11	7	2
23301	15	168	57	2	3	5	5	23	158	29	10	5	7	1	38	162	40	12	8	12	6
23401	19	164	45	8	1	6	4	31	161	37	13	8	4	6	50	162	40	21	9	10	10
23502	36	156	26	15	12	6	3	33	160	34	13	8	8	4	69	158	29	28	20	14	7
TOWNSHIP SCHOOLS																					
00101	9	162	40	2	4	3	0	9	170	62	2	0	3	4	18	166	51	4	4	6	4
00102	5	166	51	0	2	3	0	4	168	57	1	2	0	1	9	167	54	1	4	3	1
00103	10	159	32	5	1	3	1	10	161	37	3	3	3	1	20	160	34	8	4	6	2
00105	9	160	34	3	5	1	0	15	160	34	6	4	3	2	24	160	34	9	9	4	2
00106	12	161	37	6	1	3	2	9	160	34	2	5	1	1	21	161	37	8	6	4	3
00107	15	158	29	6	6	2	1	16	160	34	6	6	2	2	31	159	32	12	12	4	3
00108	16	161	37	6	3	5	2	17	163	42	4	5	6	2	33	162	40	10	8	11	4
00401	8	166	51	1	2	4	1	10	170	62	0	2	6	2	18	168	57	1	4	10	3
00601	14	151	14	11	1	1	1	21	159	32	7	7	6	1	35	156	26	18	8	7	2
00602	5	157	27	2	2	1	0	9	159	32	4	2	1	2	14	159	29	6	4	2	3

TABLE III (Continued)

School	Boys							Girls							Total						
	No.	M	%ile	Quartile Distribution				No.	M	%ile	Quartile Distribution				No.	M	%ile	Quartile Distribution			
				1-25	26-50	51-75	76-100				1-25	26-50	51-75	76-100				1-25	26-50	51-75	76-100
00803	6	180	91	0	2	0	4	12	163	42	2	6	2	2	18	169	60	2	8	2	6
00804	6	166	51	0	2	4	0	4	154	21	1	3	0	0	10	161	37	1	5	4	0
00805	9	148	10	5	2	2	0	9	146	8	8	1	0	0	18	147	9	13	3	2	0
00806	5	160	34	2	2	0	1	5	155	24	4	0	1	0	10	158	29	6	2	1	1
00807	12	165	48	3	5	1	4	11	161	37	4	3	1	3	23	163	42	8	8	2	7
00808	10	149	11	8	0	1	1	8	152	16	5	1	1	0	18	150	12	14	1	2	1
00901	5	167	54	0	3	1	1	3	154	21	2	0	1	0	8	162	40	2	3	2	1
00903	4	150	12	3	0	1	0	7	161	37	2	4	1	0	11	157	27	5	4	2	0
00905	7	170	82	2	0	2	3	5	159	32	2	2	1	0	12	165	48	4	2	3	3
00906	13	157	27	6	2	4	0	11	162	40	3	3	3	2	23	159	32	9	5	7	2
00809	5	155	24	3	0	2	0	6	156	26	2	2	1	1	11	156	28	5	2	3	1
00901	6	170	62	0	2	3	1	11	169	60	2	2	4	3	17	169	60	2	4	7	4
00902	9	157	27	3	3	3	0	5	153	19	4	0	0	1	14	156	26	7	3	3	1
00903	24	157	27	11	6	6	1	15	166	57	3	2	7	3	39	161	37	14	8	13	4
00904	8	159	32	4	1	3	0	10	168	57	0	4	5	1	18	164	45	4	5	8	1
00905	6	164	45	2	2	1	1	6	165	48	1	1	4	0	12	164	45	3	3	5	1
00906	13	155	24	7	5	0	1	10	166	51	3	4	1	2	23	160	34	10	9	1	3
00907	7	170	62	0	2	4	1	2	158	29	1	0	1	0	9	168	57	1	2	5	1
00908	7	169	60	1	1	3	2	7	177	75	0	3	1	3	14	173	66	1	4	4	5
00910	6	162	40	1	3	2	0	9	161	37	2	5	1	1	15	161	37	3	8	3	1
01002	12	159	32	5	4	3	0	12	164	45	3	4	2	3	24	161	37	8	8	5	3
01102	15	161	37	7	3	4	2	13	166	48	2	4	5	2	28	163	42	9	7	9	4
01105	2	166	48	0	1	1	0	6	165	48	1	2	3	0	8	165	48	1	3	4	0
01203	10	161	37	3	5	1	1	9	156	26	3	6	0	0	19	158	29	6	11	1	1
01503	16	163	42	6	4	3	3	12	168	57	2	1	6	3	28	165	48	8	5	9	6
01504	12	149	11	8	3	0	1	13	164	45	3	4	3	3	25	157	27	11	7	3	4
01601	12	171	64	1	4	3	4	7	157	27	3	2	2	0	19	166	51	4	6	5	4
01602	8	136	1	8	0	0	0	5	154	21	3	2	0	0	13	143	5	11	2	0	0
01603	8	156	26	4	5	0	0	7	163	42	3	1	2	1	15	159	32	7	6	2	1
01804	15	153	19	8	3	3	1	5	161	37	1	3	1	0	20	155	24	9	6	4	1
01805	9	151	14	4	3	0	0	6	161	37	2	1	2	1	12	156	28	6	3	2	1
01808	8	162	40	3	2	2	1	10	156	26	5	1	4	0	18	159	32	8	3	6	1
01807	7	177	75	0	1	4	2	7	179	79	0	1	2	4	14	178	77	0	2	6	6
01808	8	159	32	3	3	1	1	4	161	37	0	3	1	0	12	160	34	3	6	2	1
01701	9	169	60	2	2	2	3	13	165	48	5	2	3	3	22	166	51	7	4	5	6

| | | |

TABLE III (Continued)

School	Boys							Girls							Total						
	No.	M	%ile	Quartile Distribution				No.	M	%ile	Quartile Distribution				No.	M	%ile	Quartile Distribution			
				1-25	26-50	51-75	76-100				1-25	26-50	51-75	76-100				1-25	26-50	51-75	76-100
04303	10	148	10	7	2	1	0	3	167	54	0	2	1	0	13	153	19	7	4	2	0
04401	7	164	45	2	3	1	1	15	165	48	4	5	3	3	22	165	48	6	8	4	4
04402	5	156	26	3	1	0	1	5	162	40	1	2	2	0	10	159	32	4	3	2	1
04403	8	152	29	4	2	1	1	8	163	42	1	4	2	1	16	161	37	5	6	3	2
04404	5	150	12	3	2	0	0	7	169	60	1	2	3	1	12	161	37	4	4	3	1
04405	11	165	48	2	3	5	1	7	165	48	1	3	2	1	18	165	48	3	6	7	2
04407	4	145	7	3	1	0	0	5	155	24	3	1	0	1	9	151	14	6	2	0	1
04408	7	161	29	2	5	0	0	3	153	19	1	2	0	0	10	155	24	3	7	0	0
04504	23	172	16	14	5	4	0	36	160	34	12	14	10	0	59	157	27	26	19	14	0
04801	9	175	49	2	4	2	1	22	167	54	2	9	9	2	31	168	51	4	13	11	3
04807	58	153	19	30	19	7	3	68	159	29	30	18	15	5	126	156	26	60	36	22	8
05001	20	157	28	11	5	3	1	20	157	27	9	5	6		40	157	27	20	10	9	1
05003	24	177	54	5	8	2	9	21	165	48	4	7	8	2	45	166	51	9	15	10	11
05005	8	163	42	2	3	2	1	7	156	26	3	3	1		15	160	34	5	6	3	1
06001	3	155	24	2	0	0	1	5	158	29	2	1	1	1	8	157	27	4	1	1	2
06002	4	151	14	3	1	0	0	8	162	40	1	4	2	1	12	159	32	4	5	2	1
06003	9	154	21	5	3	1	0	7	175	71	0	0	5	2	16	163	42	5	3	6	2
06004	7	166	51	1	3	2	1	7	157	27	3	4	0	0	14	162	40	4	7	2	1
06006	7	152	16	4	2	1	0	10	166	51	2	3	4	1	17	160	34	6	5	5	1
06104	10	166	51	1	5	1	3	9	160	34	4	1	3	1	19	163	42	5	6	4	4
06105	11	149	11	9	1	0	1	6	150	12	5	1	0	0	17	149	11	14	2	0	1
06401	10	166	51	3	2	2	3	17	173	68	1	6	4	6	27	170	62	4	8	6	9
06403	6	164	45	2	1	3	0	13	166	51	2	3	7	1	19	166	51	4	4	10	1
06404	8	165	48	3	1	2	2	4	164	45	1	1	1	1	12	165	48	4	2	3	3
06405	10	161	37	3	4	3	0	13	166	51	1	7	3	2	23	164	45	4	11	6	2
06406	20	162	40	7	7	2	4	23	163	42	7	6	8	2	43	162	40	14	13	10	6
06408	14	162	40	3	8	2	1	10	167	54	1	1	8	0	24	164	45	4	9	10	1
06409	9	157	27	3	6	0	0	11	171	64	1	3	4	3	20	165	48	4	9	4	3
06505	10	169	60	1	3	2	4	12	178	77	1	0	5	6	22	174	69	2	3	7	10
06702	18	157	27	8	7	2	1	16	176	73	1	2	6	7	34	166	51	9	9	8	8
06804	4	167	54	0	3	0	1	8	167	54	0	4	3	1	12	167	54	0	7	3	2
06812	11	160	51	5	3	0	3	7	160	34	3	2	2	0	18	163	42	8	5	2	3
06815	8	162	40	3	3	0	1	10	161	37	4	3	2	1	18	161	37	6	6	2	2
06818	11	154	21	5	5	1	0	7	163	42	2	3	1	1	18	158	29	7	8	2	1
06909	2	146	10	2	0	0	0	10	159	32	3	6	1	0	12	157	27	5	6	1	0

07001	8	160	34	3	3	1	1	11	159	32	6	3	1	1	19	159	32	9	6	2	2
07002	10	171	64	1	3	4	2	7	161	37	2	3	2	0	17	167	54	3	6	6	2
07004	5	148	8	4	1	0	0	13	160	34	3	6	4	0	18	156	26	7	7	4	0
07006	10	160	34	4	1	4	1	15	168	57	3	6	2	4	25	165	48	7	7	6	5
07105	23	158	39	13	5	2	3	18	158	29	6	8	4	0	41	158	29	19	13	6	3
07108	19	165	48	7	3	5	4	24	163	42	8	8	5	3	43	164	45	15	11	10	7
07201	10	170	62	1	2	2	5	12	170	62	1	4	5	2	22	170	62	2	6	7	7
07202	7	162	40	4	0	2	1	9	166	51	2	4	1	2	16	164	45	6	4	3	3
07504	7	160	34	2	3	1	1	13	161	37	5	3	3	2	20	161	37	7	6	4	4
07505	4	159	32	0	4	0	0	9	172	66	1	2	2	4	13	168	57	1	6	2	4
07601	9	153	19	4	3	2	0	16	154	21	11	2	2	1	25	154	21	15	5	4	1
08001	5	148	10	5	0	0	0	4	136	1	4	0	0	0	9	143	5	9	0	0	0
08005	15	157	27	8	3	2	2	14	166	51	2	8	1	3	29	162	40	10	11	3	5
08103	5	167	54	2	1	0	2	0	--	--	0	0	0	0	5	167	54	2	1	0	2
08301	13	151	14	9	2	1	1	8	153	19	5	0	3	0	21	151	14	14	2	4	1
08302	7	155	24	3	2	2	0	5	164	45	1	1	3	0	12	159	32	4	3	5	0
08303	5	168	57	1	0	4	0	5	173	68	0	1	2	2	10	170	62	1	1	6	2
08304	5	163	42	2	0	2	1	11	168	57	2	4	1	4	16	166	51	4	4	3	5
08305	10	161	37	3	5	0	2	13	167	54	3	5	1	4	23	164	45	6	10	1	6
08306	7	163	42	1	4	2	0	12	149	11	7	5	0	0	19	154	21	8	9	2	0
08401	20	157	27	10	6	3	1	21	164	45	6	7	4	4	41	161	37	16	13	7	5
08410	17	161	37	6	6	6	3	45	156	26	22	13	5	5	62	157	27	28	19	7	8
08505	14	160	34	7	3	2	2	12	165	48	2	3	6	1	26	163	42	9	8	8	3
08507	11	163	42	2	5	4	0	14	170	62	3	2	5	4	25	167	54	5	7	9	4
08508	5	156	26	3	1	1	0	10	168	57	3	1	4	2	15	164	45	6	2	5	2
08510	3	149	11	2	1	0	0	10	162	40	3	2	5	0	13	160	34	5	3	5	0
08802	8	143	5	7	0	1	0	7	158	29	2	3	2	0	15	152	16	9	3	3	0
08802	2	165	48	0	1	1	0	8	171	64	1	2	4	1	10	170	62	1	3	5	1
SPECIAL SCHOOLS																					
11402	39	170	62	8	4	12	15	43	166	51	10	12	9	12	82	168	57	18	16	21	27
13102	11	171	64	1	5	1	4	20	171	64	3	4	5	8	31	171	64	4	9	6	12
15602	12	163	42	3	6	1	2	13	170	62	2	3	4	4	25	167	54	5	9	5	6
15711	21	163	42	4	11	1	5	22	171	64	4	3	5	10	43	167	54	8	14	6	15
15712	0	--	--	0	0	0	0	71	169	60	11	13	28	19	71	169	60	11	13	28	19
15713	0	--	--	0	0	0	0	50	161	37	19	18	4	9	50	161	37	19	18	4	9
15714	0	--	--	0	0	0	0	67	170	62	11	15	18	23	67	170	62	11	15	18	23
17502	-	--	--	0	0	0	0	17	164	45	2	8	5	2	17	164	45	2	8	5	2
18401	22	158	29	9	8	2	3	31	158	29	13	6	8	4	53	158	29	22	14	10	7
18702	15	162	40	4	6	4	1	30	169	60	7	4	8	11	45	167	54	11	10	12	12
21904	22	168	57	5	4	8	5	25	167	54	8	1	8	8	47	167	54	13	5	16	13
22002	0	--	--	0	0	0	0	8	171	64	1	4	2	3	8	171	64	1	4	0	3
00804	37	155	24	16	13	5	3	31	160	34	13	7	9	2	68	157	27	29	20	14	5
01304	7	172	66	1	1	3	2	16	170	62	2	3	6	5	23	171	64	3	4	9	7
01702	22	164	45	5	10	3	4	18	165	48	5	5	5	3	40	165	48	10	15	8	7

TABLE III (Continued)

School	Boys							Girls							Total						
	No.	M	%ile	Quartile Distribution				No.	M	%ile	Quartile Distribution				No.	M	%ile	Quartile Distribution			
				1-25	26-50	51-75	76-100				1-25	26-50	51-75	76-100				1-25	26-50	51-75	76-100
02603	15	166	51	4	5	2	4	30	168	57	6	6	7	11	45	167	54	10	11	9	15
03304	10	160	34	4	4	1	1	18	159	32	7	5	6	0	28	159	32	11	9	7	1
05603	11	156	26	5	6	0	0	10	155	24	5	3	2	0	21	155	24	10	9	2	0
05903	17	163	42	3	5	8	1	27	160	34	10	8	8	1	44	161	37	13	13	16	2
08007	2	178	77	0	0	0	2	8	163	42	4	0	1	3	10	166	51	4	0	1	5
07003	17	158	29	6	9	2	0	27	159	32	13	5	5	4	44	159	32	19	14	7	4
07303	8	162	40	3	1	3	1	4	153	19	3	0	0	1	12	159	32	6	1	3	2
07706	12	155	24	11	3	4	1	19	163	42	7	4	4	4	38	159	32	18	7	8	5
08102	12	174	45	3	5	2	2	11	166	51	2	5	1	3	23	165	48	5	10	3	5

122, or 80 per cent, test below the norm and 31, or 20 per cent, test above the norm.

The total test centile range for the 152 groups (there was 1 township high school in which no sophomore girls were tested) of sophomore girls enrolled in township high schools varies from a low of 1 (school 08001) to a high of 79 (school 01607). All 4 of the girls in school 08001 test in the first quartile and are definitely poor readers. Four of the 7 girls in school 01607 test in the fourth quartile and are superior readers and the other 3 test in the second and third quartiles and may be considered to have average reading proficiency. Of the 152 groups of sophomore girls tested, 105 groups, or 67 per cent, are below the test norm and 47 groups, or 33 per cent, are above the test norm.

The total test centile range for the 153 township high school groups (both boys and girls) varies from a low of 5 (schools 01602 and 08001) to a high of 77 (school 01607). Only 2 of the 13 sophomores in school 01602 test as high as the second quartile, 11 testing in the first quartile. All 9 of the pupils in school 08001 test in the first quartile. To expect these two groups to master the content courses of the sophomore year in high school is expecting the impossible. None of the 14 sophomores in school 01607 test in the first quartile, 2 are in the second quartile, 6 in the third, and 6 in the fourth. Of the 153 groups of sophomores tested in the township high schools, 120 groups, or 78 per cent, test below the norm and 33 groups, or 22 per cent, test above the norm.

The total test centile range for the 19 groups of sophomore boys enrolled in special high schools (no boys were tested in 5 special schools) varies from a low of 24 (schools 00804 and 07706) to a high of 77 (school 06007). Of the 37 boys in school 00804, 16 test in the first quartile, 13 in the second, 5 in the third, and 3 in the fourth. The quartile distribution of the 19 boys in school 07706 is quite similar, 11 testing in the first quartile, 3 in the second, 4 in the third, and 1 in the fourth. Only 2 boys were enrolled in school 06007, and both test in the fourth quartile. Of the 19 groups of sophomore boys tested in the special schools, 13 groups, or 68 per cent, test below the norm and 6 groups, or 32 per cent, test above the norm.

The total test centile range for the 24 special school groups enrolled in special schools varies from a low of 19 (school 07503) to a high of 64 (schools 13102, 15711, and 22002). Three of the 4 girls in school 07503 test in the first quartile and the other 1 tests in the fourth quartile. In the three schools with a centile of 64 almost all the girls are average or superior readers. Exactly half of the 24 groups of sophomore girls in the special schools test below the norm and half above the norm.

The total test centile range for the 24 special school groups (both boys and girls) varies from a low of 24 (school 05603) to a high of 64 (schools 13102, 22002, and 01304). Not one of the 21 students in school 05603 tests in the fourth quartile; 10 test in the first quartile, 9 in the second, and 2 in the third. Almost all the pupils in the three schools testing highest are average or superior

readers. Twelve, or 50 per cent, of the 24 groups of sophomore pupils in the special schools test below the norm.

A study of the reading proficiency of the 238 groups of sophomore boys from all three types of schools (there were 5 schools in which there were no sophomore boys tested) shows that 178 groups, or 75 per cent, test below the norm, and 60 groups, or 25 per cent, test above the norm. Of the 242 groups of sophomore girls (there was one school in which no sophomore girls were tested), 161 groups, 66 per cent, test below the norm and 81 groups, 34 per cent, test above the norm. When the group reading proficiency of boys is compared with that of girls it is found that 9 per cent more groups of girls than of boys test above the norm. Of the total groups (boys and girls), 175, or 74 per cent, test below the norm and 68, or 26 per cent, test above the norm.

The data in Table III deserve the most careful attention of principals and teachers. The large number of sophomore groups testing below average shows clearly that the reading program for many schools is not functioning efficiently. Group performance may be misleading and not too accurate when described by one measure only, that of total test centile, but, when this measure is supported by the quartile distribution of the students within the groups, an interpretative analysis may be made.

Principals and teachers should take a realistic point of view concerning the reading proficiency of high school pupils. When a group fails to test to expectation, the problem should be analyzed to discover reasons for inefficiency. More standardized measurement, especially of a diagnostic nature, and more attention to silent reading skills in all high school subjects should lead to higher reading proficiency for each individual pupil.

Schools which test particularly low might profit from a study of the methods and procedures in teaching reading used by those schools testing well above expectancy. Group meetings of teachers from all levels of the schools for the purpose of discussing ways and means to better reading proficiency should be helpful. Too often teachers have blamed poor reading ability of pupils on low I.Q.'s. It is true that a relatively high positive correlation is usually found between intelligence test scores and reading test scores, but this may be due to the fact that both types of tests measure the same kind of skills. Most intelligence tests are heavily loaded with the language factor, and to expect a poor reader to do well on this type of test is expecting a miracle.

The number and per cent of boys, girls, and all pupils, means of the total test scores and corresponding centiles, quartile distribution of total test scores, and means and corresponding centiles on each of the nine subtests are given in Table IV, grouped according to type of school. Of the 7,232 sophomores enrolled in the 66 city schools, 3,333, or 46 per cent, are boys, and 3,899, or 54 per cent, are girls. On the total test the centile for boys is 40, for girls, 45, and for all pupils, 42. A total of 2,177 pupils (1,109 boys and 1,068 girls), or 30 per cent of the group, test in the first quartile and may

TABLE IV. NUMBER AND PER CENT OF PUPILS, MEANS OF TOTAL TEST SCORES AND CORRESPONDING CENTILES, QUARTILE DISTRIBUTION OF TOTAL TEST SCORES, AND THE MEANS AND CORRESPONDING CENTILES ON EACH OF THE SUBTESTS, FOR BOYS, GIRLS AND TOTAL PUPILS TESTED IN EACH TYPE OF SCHOOL

Pupils	Number	Per Cent	Total Test Score						Test 1R		Test 1C		Test 2		Test 3		Test 4		Test 5		Test 6		Test 7A		Test 7B	
			M	%ile	Quartile Distribution				M	%ile	M	%ile	M	%ile	M	%ile	M	%ile	M	%ile	M	%ile	M	%ile	M	%ile
					1-25	26-50	51-75	76-100																		
CITY SCHOOLS (66 schools)																										
Boys	3333	46	162	40	1109	896	717	611	166	49	162	40	158	34	161	41	161	41	164	47	162	43	158	35	163	43
Girls	3899	54	164	45	1068	1063	981	787	166	49	162	40	162	41	164	47	161	41	167	53	162	43	166	50	166	49
Total	7232	100	163	42	2177	1959	1698	1398	166	49	162	40	160	37	163	44	161	41	166	51	162	43	162	42	164	45
TOWNSHIP SCHOOLS (153 schools)																										
Boys	1584	49	159	32	635	455	293	201	159	36	158	33	158	34	161	41	158	35	158	35	158	35	157	34	162	41
Girls	1673	51	162	40	507	512	414	240	161	39	158	33	163	43	165	49	160	39	163	46	160	39	164	45	165	47
Total	3257	100	161	37	1142	967	707	441	160	37	158	33	161	39	163	44	159	37	161	41	159	37	160	38	164	45
SPECIAL SCHOOLS (24 schools)																										
Boys	319	34	163	42	95	106	62	56	164	45	163	42	158	34	161	41	163	45	163	46	163	44	158	35	165	47
Girls	616	66	165	48	168	142	156	150	162	41	161	38	165	47	164	47	165	49	168	55	163	44	167	52	169	56
Total	935	100	164	45	263	248	218	206	163	43	162	40	162	41	163	44	164	47	166	51	163	44	164	45	168	54
ALL SCHOOLS (243 schools)																										
Boys	5236	46	161	37	1839	1457	1072	868	164	45	161	38	158	34	161	41	160	39	162	44	161	41	158	35	163	43
Girls	6188	54	164	45	1743	1717	1551	1177	164	45	161	38	163	43	164	47	161	41	166	51	162	43	165	48	166	49
Total	11424	100	163	42	3582	3174	2623	2045	164	45	161	38	160	37	163	44	161	41	164	47	161	41	162	42	164	45

be considered poor readers; 1,959 pupils (896 boys and 1,063 girls) test in the second quartile; and, 1,698 pupils (717 boys and 981 girls) test in the third quartile. A total of 3,657 pupils (1,613 boys and 2,044 girls), or 51 per cent, of the city school sophomores test in the second and third quartiles and may be considered average readers, while 1,398 pupils (611 boys and 787 girls), or 19 per cent of the group, test in the fourth quartile and may be considered superior readers. Although slightly more than half of the group are average readers, there are 11 per cent more poor readers than superior readers.

Boys, girls, and the total group test in the 49th centile on Test 1R, rate, and in the 40th centile on Test 1C, comprehension. Although the 7,232 sophomores in the 66 city schools test very close to expectation on rate reading, they test 10 centiles below the norm on comprehension. The centile for boys on Test 2, directed reading, is 34, for girls 41, and for the group 37. Although girls test 7 centiles higher than boys, they are 9 centiles below the test norm. The group centile of 37 is 13 centiles below expectation and indicates that the sophomores as a group have received poor instruction in directed reading.

The centile for boys on Test 3, poetry comprehension, is 41, for girls 47, and for the group 44. Girls test 6 centiles higher than boys and closely approach expectation. The centile for boys, girls, and the total group on Test 4, word meaning, is 41. This is 9 centiles below the test norm and indicates deficient group instruction in word meaning. The centile for boys on Test 5, sentence meaning, is 47, for girls 53, and for the group 51. Sentence meaning is the only test on which the pupils test to expectation. The centile for Test 6, paragraph comprehension, for boys, girls, and the total group is 43, which indicates a lack of emphasis on paragraph comprehension.

The centile for boys on Test 7A, use of index, is 35, 15 centiles below expectation, for girls 50, and for the group 42. The wide difference between the centiles in use of index needs investigation. The centile for boys on Test 7B, selection of key words, is 43, for girls 49, and for the group 45.

Of the 3,257 sophomores tested in 153 township schools, 1,584, or 49 per cent, are boys, and 1,673, or 51 per cent, are girls. The total test centile for boys is 32, for girls 40, and for the group 37. Although the girls test 8 centiles higher than the boys, they are 10 centiles below the test norm, and the centile, 37, for the group indicates that the pupils in the township schools are far from average readers. A total of 1,142 pupils (635 boys and 507 girls), or 35 per cent of the pupils, test in the first quartile and are definitely deficient in silent reading skills; 1,674 pupils (748 boys and 926 girls), or 51 per cent, test in the second and third quartiles and may be considered average readers; and 441 pupils (201 boys and 240 girls), or 14 per cent, test in the fourth quartile and may be considered superior readers.

Boys test in the 36th centile on Test 1R, rate, girls test in the 39th, and the group in the 37th. The rate of reading of township

pupils is much too slow as measured by the test norm. Although boys, girls, and the group attain the same centile, 33, on Test 1C, comprehension, proficiency in this important aspect of silent reading is so low that township principals and teachers should be seriously concerned. On Test 2, directed reading, boys test in the 34th centile, girls in the 43rd, and the group in the 39th. Girls test 9 centiles higher than the boys but are themselves 7 centiles below expectation. Boys are in the 41th centile, girls in the 49th, and the group in the 44th on Test 3, poetry comprehension. Girls are approximately average in poetry comprehension but boys are 9 centiles below the test norm. Both boys and girls have a low centile on Test 4, word meaning, the centile for boys being 35, for girls 39, and for the group 37. Boys are weak on Test 5, sentence meaning, testing only in the 35th centile, but girls are 9 centiles higher, reaching the 46th centile, and the group as a whole is in the 41st centile. Both boys and girls have a low centile on Test 6, paragraph comprehension. That for boys is 35, for girls 39, and for the group 37. Boys are weak, 34, on Test 7A, use of index, but girls test 45. The centile for the group is 38, 12 centiles below expectation. On Test 7B, selection of key words, boys test in the 41st centile, girls in the 47th, and the total group in the 45th.

The silent reading proficiency of township sophomores is well below expectation as measured both by the total test score and by the scores on the nine subtests.

Of the 935 sophomores enrolled in the 24 special schools, 319, or 34 per cent, are boys and 616, or 66 per cent, are girls. On the total test the boys' centile is 42, the girls' 48, and the group's 45. As measured by the total test score, special school pupils test 5 centiles below expectation. A total of 263 pupils (95 boys and 168 girls), or 28 per cent, test in the first quartile and may be considered poor readers; 168 boys and 298 girls, a total of 466, or 50 per cent, test in the second and third quartiles and may be considered average readers; and 56 boys and 150 girls, a total of 206, or 22 per cent, test in the fourth quartile and may be considered superior in reading ability.

Boys have a centile of 45 on Test 1R, rate, which is 4 centiles higher than that attained by girls. The group centile is 43. Boys also test 4 centiles higher than girls on Test 1C, comprehension, boys testing 42, girls 38, and the group 40. On Test 2, directed reading, boys test low, 34, while girls test 47, 13 centiles higher, the group centile being 41. On Test 3, poetry comprehension, boys test in the 41st centile, girls in the 47th, and the group in the 44th. On Test 4, word meaning, boys test 45, girls 49, and the group 47. On Test 5, sentence meaning, boys have a centile of 46, girls of 55, and the group of 51. Boys, girls, and the group test the same, 44, on Test 6, paragraph comprehension. On Test 7A, use of index, boys test low, falling in the 35th centile, while girls are in the 52nd centile, 17 centiles higher. The group centile is 45. Boys test in the 47th centile, girls in the 56th, and the group in the 54th on Test 7B, selection of key words.

As measured by the total test centile and by the subtest centiles, the group of special school sophomores tests near expectation. On two of the subtests, Test 2, directed reading, and Test 7A, use of the index, boys test very low, but on some of the other subtests there is no evidence of lack of emphasis. An examination of the subtest scores shows no overemphasis on the reading skills tested.

There were 11,424 sophomores tested in 243 schools; 5,236, or 46 per cent, were boys and 6,188, or 54 per cent, were girls. On the total test the boys attain a centile of 37, 13 centiles below the test norm; girls attain a centile of 45, 5 centiles below expectation; and the total group centile of 42, which becomes the state norm, is 8 centiles below the test norm. A total of 3,582 pupils (1,839 boys and 1,743 girls), or 31 per cent, test in the first quartile and are definitely deficient in silent reading ability; 2,529 boys and 3,268 girls, a total of 5,797 pupils, or 51 per cent, test in the second and third quartiles and may be considered average readers; and 868 boys and 1,177 girls, a total of 2,045 pupils, or 18 per cent, test in the fourth quartile and may be considered superior readers.

Boys, girls, and the total group have a centile of 45 on Test 1R, rate, and of 38 on Test 1C, comprehension. Boys are in the 34th centile, girls in the 43rd, and the whole group in the 37th centile, or 13 centiles below the test norm, on Test 2, directed reading. On Test 3, poetry comprehension, girls are 6 centiles higher than boys but 3 centiles below the norm. The whole group is 6 centiles below the test norm. The centile for boys on Test 4, word meaning, is 39, for girls 41, and for the group 41, and on Test 5, sentence meaning, the centile for boys is 44, for girls 51, and for the group 47. The centile for boys on Test 6, paragraph comprehension, is 41, for girls 43, and for the group 41, 9 centiles below the test norm. Boys are in the 35th centile, girls in the 48th, and the group in the 42nd on Test 7A, use of index. The centile for boys on Test 7B, selection of key words, is 43, for girls 49, and for the group 45.

Although all the subtest scores are below the test norm, the centiles for Test 1C (38) and Test 2 (37) are so far below expectation that instruction must have been deficient for large numbers of the pupils tested in this study. With about a third of the sophomore pupils definitely deficient in silent reading, the situation should be alarming enough to school people to cause a careful analysis of reading instruction in both the elementary and the high school grades. There seems to be only one logical reason for the fact that high school sophomores in Indiana test below expectation, and that is that instruction in silent reading is ineffective.

Comparison of the achievement of pupils in different types of schools is shown graphically in Figure 2.

In city schools girls test 5 centiles higher than boys on the total test, in township schools 8 centiles higher, and in special schools 6 centiles higher. The group of girls from all of the schools tests 8 centiles higher than that of the boys. The sophomores in the special schools test highest, in the 45th centile on the total test; city school pupils are next, in the 42nd centile; and township school pupils test

lowest, in the 37th centile. Township pupils are 5 centiles below city school pupils and 8 centiles below special school pupils.

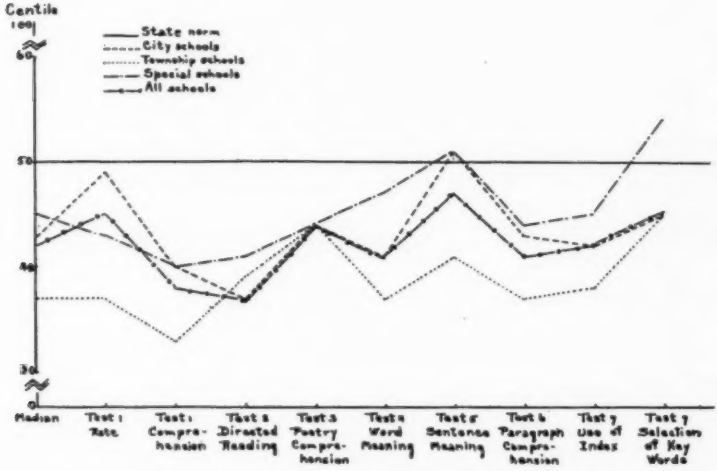

Fig. 2. Achievement of Pupils in Different Types of Schools

Length of School Year—The number and per cent of schools, number and per cent of pupils, total test scores and corresponding centiles, and the quartile distribution of pupils classified according to length of school term are given in Table V. The 233 pupils enrolled in the 5 city schools having an 8-month term attain a total test centile of 32, the lowest centile of any of the groups. There are no city school pupils in schools with 8¼-, 8½-, and 10-month terms. The 4,234 sophomores enrolled in 44 city schools with a 9-month term attain a total test centile of 42, 10 centiles higher than that of the group enrolled in the 8-month schools. The highest centile, 57, is attained by the 329 pupils enrolled in the city school with a 9½-month term, while the 884 pupils enrolled in 4 city schools with a 9½-month term are only 3 centiles lower. The 1,476 pupils enrolled in 10 city schools with 10-month terms attain a total test centile of 42, exactly the same as that attained by the pupils from the 9-month schools. As measured by the total test centile, pupils from the 9¼- and 9½-month schools test significantly higher than those from the 8-, 9-, and 10-month schools, and the groups from the 9- and 10-month schools test significantly higher than the group from the 8-month schools.

Groups from schools of only three different length school terms, 8, 8½, and 9 months, are included in the township school data. The 2,436 pupils enrolled in 127 township schools with a school term of 8 months and the 192 pupils in 6 schools with an 8½-month term

TABLE V. NUMBER AND PER CENT OF SCHOOLS, NUMBER AND PER CENT OF PUPILS, TOTAL TEST SCORES AND CORRESPONDING CENTILES, AND QUARTILE DISTRIBUTION OF PUPILS, GROUPED ACCORDING TO LENGTH OF SCHOOL YEAR

Number of Months in School Year	Schools		Pupils		Total Test Score		Quartile Distribution			
	No.	%	No.	%	Mean	%ile	1-25	26-50	51-75	76-100
CITY SCHOOLS										
10	10	15	1,476	21	163	42	453	437	327	259
9½	4	6	884	12	167	54	217	196	239	232
9¼	1	2	329	5	168	57	50	92	105	82
9	44	69	4,243	59	163	42	1,349	1,149	966	779
8½	0	0	0	0	0	0	0	0	0	0
8¼	0	0	0	0	0	0	0	0	0	0
8	5	8	233	3	159	32	97	64	46	26
TOWNSHIP SCHOOLS										
10	0	0	0	0	0	0	0	0	0	0
9½	0	0	0	0	0	0	0	0	0	0
9¼	0	0	0	0	0	0	0	0	0	0
9	19	13	581	18	160	34	208	177	129	67
8½	6	4	192	6	161	37	71	59	38	24
8¼	0	0	0	0	0	0	0	0	0	0
8	127	84	2,436	76	161	37	851	722	523	340
SPECIAL SCHOOLS										
10	1	4	44	5	159	32	19	14	7	4
9½	1	4	43	5	167	54	8	14	6	15
9¼	0	0	0	0	0	0	0	0	0	0
9	12	50	471	50	164	45	139	130	104	98
8½	0	0	0	0	0	0	0	0	0	0
8¼	0	0	0	0	0	0	0	0	0	0
8	10	42	377	40	166	51	97	90	101	89
ALL SCHOOLS										
10	11	5	1,520	13	163	42	472	451	334	263
9½	5	2	927	8	167	54	225	210	245	247
9¼	1	0	329	3	168	57	50	92	105	82
9	75	31	5,295	47	162	40	1,696	1,456	1,199	944
8½	6	3	192	2	161	37	71	59	38	24
8¼	0	0	0	0	0	0	0	0	0	0
8	142	59	3,046	27	161	37	1,045	876	670	455

attain a total test centile of 37, while the 581 pupils enrolled in 19 schools with a 9-month term are 3 centiles lower. There is no evidence that increasing the length of the school term of the township schools by one month increases reading proficiency. As far as these data are concerned, there is a slight, but probably not significant, difference in reading proficiency between the groups from the 8-, 8½-, and 9-month schools. It is interesting to note that only 3 per cent of the city school pupils as compared with 76 per cent of the township pupils, are enrolled in 8-month schools.

The 337 pupils from 10 special schools with an 8-month term attain a group centile of 51, while the 471 pupils from 9-month special schools test to the 45th centile, 6 centiles lower. None of the pupils tested come from special schools with an 8¼-, 8½-, or 9¼-month term. The highest group centile, 54, is attained by the 43 pupils from the one special school with a term of 9½ months and the lowest centile, 32, by the 44 pupils from the one special school with a 10-month term. There is no evidence that group reading pro-

ficiency of the pupils from the special schools varies directly with increases or decreases in the length of the school term.

A comparison of group centiles of pupils enrolled in three types of schools having the same length term presents some interesting data. The lowest group centile is attained by the 233 pupils from the 5 city schools having an 8-month term, while the 2,436 township pupils enrolled in 8-month schools are 5 centiles higher and the 377 special school pupils in 8-month schools are 19 centiles higher. In the 9-month schools, the only other length school term in which pupils were tested from all three types of schools, the 4,243 city school pupils have a centile of 42, which is 8 centiles higher than that of the 581 township pupils and 3 centiles lower than that of the 471 special school pupils. These data indicate that factors other than the length of the school term cause differences in reading proficiency.

A comparison of the group achievement of pupils from all the schools shows that those from the 8- and 8½-month schools test lowest, attaining the 37th centile; those from the 9-month schools attain the 40th centile; and those from the 9¼-month schools, the 57th centile. The fact that there is only one school in this latter group, however, detracts from the predictive value of the data. The pupils from 9½-month schools attain a centile of 54 and those from 10-month schools a centile of 42.

These data show no clear-cut evidence that achievement in silent reading is modified by the length of the school term. It is true that the group of city school pupils from the 8-month schools test the lowest of any group, but the number of students in this group represents only 3 per cent of the total number of city pupils tested. Further, the increase in group achievement with increase in length of school term is not steady. The pupils from the township schools enrolled in 9-month schools test lower than those from either 8- or 8½-month schools. In the special schools the groups from both the 9- and 10-month schools test lower than the group from the 8-month schools. When all schools are considered, the lowest testing groups are those from the 8- and 8½-month schools. The study of the data in Table V indicates that factors other than the length of the school term are largely responsible for group differences in silent reading proficiency.

Size of School—The number and per cent of schools, number and per cent of pupils, total test scores and corresponding centiles and the quartile distribution of pupils classified according to number of high school pupils in the school are given in Table VI. The 105 sophomores enrolled in 4 city schools with a high school enrollment of 100-149 (the smallest city schools in which pupils were tested) attain a group centile of 32, 18 centiles below the test norm. The 206 pupils from 5 city schools with an enrollment 150-199 have a centile of 51, 1 centile above the test norm and 19 centiles above that of the pupils enrolled in schools of 100-149. In the four other sizes of schools, the group centiles are the same, 42. Thus reading proficiency is poorest in city schools with an enrollment of 100-149 and best in schools with an enrollment of 150-199.

TABLE VI. NUMBER AND PER CENT OF SCHOOLS, NUMBER AND PER CENT OF PUPILS, TOTAL TEST SCORES AND CORRESPONDING CENTILES, AND QUARTILE DISTRIBUTION OF PUPILS, GROUPED ACCORDING TO SIZE OF SCHOOL

Size of School	School		Pupils		Total Test Score		Quartile Distribution			
	No.	%	No.	%	Mean	%ile	1-25	26-50	51-75	76-100
CITY SCHOOLS										
1,000-	7	11	2,049	29	163	42	662	522	459	406
500-999	16	25	2,611	36	163	42	765	717	643	486
350-499	9	14	844	12	163	42	252	229	199	164
200-349	23	36	1,350	19	163	42	397	372	321	260
150-199	5	8	206	3	166	51	47	66	40	53
100-149	4	6	105	1	159	32	43	32	21	9
50- 99	0	0	0	0	0	0	0	0	0	0
1- 49	0	0	0	0	0	0	0	0	0	0
TOWNSHIP SCHOOLS										
1,000-	0	0	0	0	0	0	0	0	0	0
500-999	1	0	126	4	156	26	60	36	22	8
350-499	0	0	0	0	0	0	0	0	0	0
200-349	7	5	326	10	158	29	140	91	67	28
150-199	13	9	437	14	162	40	151	127	88	71
100-149	38	25	929	29	162	40	312	267	199	151
50- 99	75	50	1,216	38	162	40	398	380	285	153
1- 49	17	11	163	5	159	32	66	51	27	19
SPECIAL SCHOOLS										
1,000-	0	0	0	0	0	0	0	0	0	0
500-999	0	0	0	0	0	0	0	0	0	0
350-499	1	4	82	9	168	57	18	16	21	27
200-349	9	38	441	47	163	42	136	111	111	83
150-199	4	17	175	19	162	40	58	52	34	31
100-149	6	25	190	20	167	54	38	56	43	53
50- 99	3	13	37	4	164	45	9	13	8	7
1- 49	1	4	10	1	166	51	4	0	1	5
ALL SCHOOLS										
1,000-	7	3	2,049	18	163	42	662	522	459	406
500-999	17	7	2,737	24	163	42	825	753	665	494
350-499	10	4	926	8	164	45	270	245	220	191
200-349	39	16	2,117	19	163	42	673	574	499	371
150-199	22	9	818	7	163	42	256	245	162	155
100-149	48	20	1,224	11	162	40	393	355	263	213
50- 99	78	33	1,253	11	162	40	407	393	293	160
1- 49	18	8	173	2	159	32	70	51	28	24

The 163 township school pupils from 17 high schools with an enrollment of 1-49 attain a centile of 32, 18 centiles below the test norm. In the next three sizes of schools, the group centile, 40, is the same. The group centile for the 326 pupils from 7 schools with an enrollment of 200-349 is 29, while that for the 126 pupils from the 1 school with an enrollment of 500-999 is still lower, 26, or 24 centiles below the test norm. According to the data, reading proficiency is poorest in township schools with an enrollment of 500-999 and best in schools with an enrollment of 50-99, 100-149, and 150-199.

The 10 pupils from 1 special school with an enrollment of 1-49 have a group centile of 51; the 37 pupils from 3 schools with an enrollment of 50-99, a centile of 45; the 190 pupils from 6 schools with an enrollment of 100-149, a centile of 54; the 175 pupils from 4 schools with an enrollment of 150-199, a centile of 40; the 441 pupils from

9 schools with an enrollment of 200-349, a centile of 42; and the 82 pupils from the 1 special school with an enrollment of 350-499, a centile of 57. In special schools, reading proficiency is poorest in schools with an enrollment of 150-199 and best in schools with an enrollment of 350-499.

When the test scores for all the pupils from the three types of schools are classified according to size of school, the 173 pupils from 8 schools with an enrollment of 1-49 have a total test group centile of 32, 18 centiles below the test norm. The 1,253 pupils from 78 schools with an enrollment of 50-99 and the 1,224 pupils from 48 schools with an enrollment of 100-149 attain a centile of 40, 10 centiles below the test norm, and the pupils from schools with an enrollment of 350-499 attain a centile of 45. A centile of 42 is attained by all the other groups.

Reading proficiency is poorest in schools with an enrollment of 1-49 and best in schools with an enrollment of 350-499. The data for all the pupils from the three types of schools classified according to size of school indicate that group reading proficiency in the smallest (1-49) high schools is significantly lower than that in groups from any of the other sizes of schools. There is no conclusive evidence that the size of school above an enrollment of 1-49 affects reading proficiency. It is interesting to note that, of the 243 high schools in which sophomores were tested, 70 per cent have an enrollment of fewer than 200 high school pupils. Only 31 per cent of the pupils tested, however, are enrolled in these smaller schools.

SUMMARY

The Iowa Silent Reading Tests, New Edition, Advanced Test (Revised): Form BM was given to 11,424 sophomores enrolled in 243 high schools well distributed over the State of Indiana. Tests were administered by principals and teachers, and the results were transmitted on special forms to the Bureau of Cooperative Research and Field Service, at Indiana University. The test data were coded and processed by the Hollerith technique. The centile norm both for the total tests and for each of the nine subtests is 50. Achievement of pupils was studied in relation to their centile deviation from the test norm, and achievement of groups was studied in relation to the total test centile, subtest centiles, and quartile distribution of pupils within the group. Some of the important findings of the testing are:

1. There are great individual differences in silent reading proficiency. Within most groups (schools) centiles range from 1 to 100. Such wide differences in reading proficiency within groups would, it seems, make effective group instruction in the academic subjects of high school sophomores difficult if not impossible.

2. Variations in subtest scores indicate that in many schools certain aspects of silent reading are being neglected. There is less evidence of overemphasis on any of the basic reading skills tested.

3. There are wide differences in reading proficiency between groups. The centile range for the 66 groups of city school sophomores is 19-73, a difference of 54 centiles; for the 153 township groups,

5-77, a difference of 72 centiles; and for the 24 special school groups, 24-64, a difference of 40 centiles.

4. The total test centile for the 11,424 high school sophomores tested is 42, 8 centiles below the test norm.

5. Of the 11,424 pupils tested, 5,236, or 46 per cent, are boys and 6,188, or 54 per cent, are girls.

6. The centile of boys is 37 and that of girls is 45, 8 centiles higher.

7. In the group tested, 2,177 sophomores, or 30 per cent, test in the first quartile and are poor readers; 3,657 pupils, or 51 per cent, test in the second and third quartiles and may be considered as having average reading ability; and 1,398 pupils, or 19 per cent, test in the fourth quartile and are superior readers.

8. There are 11 per cent more poor readers in the group than superior readers.

9. The sophomores in the special schools test highest, in the 45th centile, on the total test; city school pupils are next, in the 42nd centile; and township pupils test lowest, in the 37th centile. Township pupils test 5 centiles below city school pupils, 8 centiles below special school pupils, and 13 centiles below the test norm.

10. Groups testing lowest are those from schools with terms of 8 or 8½ months, but the evidence is not conclusive that proficiency in silent reading is modified by the length of the school term, because increase in group achievement with increase in length of school term is not steady.

11. The scores for all the sophomores from the three types of schools, classified according to size of school, show that group reading proficiency in the smallest high school (1-49 pupils) is significantly lower than that in groups from any of the other sizes of schools.

12. There is no conclusive evidence that reading proficiency is affected by size of school when the enrollment is above 49.

13. Of the 243 high schools in which sophomores were tested, 70 per cent have an enrollment of fewer than 200 high school pupils. Only 31 per cent of the pupils tested, however, are enrolled in these smaller schools.

A List of Bulletins in the Field of Education, Indiana University

By Kathleen Dugdale

The School of Education at Indiana University has published the following bulletins. All of these may be obtained from the University Bookstore for 50 cents postpaid unless otherwise noted.

Proceedings of the High School Principals' Conference (November 23 and 24, 1923). Vol. I, No. 1, 1924. 85 p. (Supply exhausted.)

Investigation of Nursing as a Professional Opportunity for Girls, Part I, Technical Study; Part II, Vocational Information Bulletin. By Florence E. Blazier. Vol. I, No. 2, 1924. 69 p.

Proceedings of the Eleventh Conference on Educational Measurements. Vol. I, No. 3, 1925. 141 p.

Proceedings of the High School Principals' Conference (November 14 and 15, 1924). Vol. I, No. 4, 1925. 49 p. (Supply exhausted.)

First Revision of the Bibliography of Educational Measurements. Compiled by the Bureau of Cooperative Research. Vol. I, No. 5, 1925. 147 p. (Supply exhausted.)

Proceedings of the Twelfth Conference on Educational Measurements. Vol. I, No. 6, 1925. 76 p.

The Effect of Population upon Ability to Support Education. By Harold F. Clark. Vol. II, No. 1, 1925. 28 p.

Proceedings of the High School Principals' Conference (November 20 and 21, 1925). Vol. II, No. 2, 1925. 77 p. (Supply exhausted.)

A Cross-Indexed Bibliography on School Budgets. By Harold F. Clark. Vol. II, No. 3, 1926. 66 p.

A Comparison of the Results Made on Certain Standardized Tests by Pupils in the Bloomington High School Who Were Taught in Classes of the Same Grade by University Student Teachers and by Regular High School Teachers. By Carl G. F. Franzén. Vol. II, No. 4, 1926. 19 p.

Proceedings of the Thirteenth Annual Conference on Educational Measurements. Vol. II, No. 5, 1926. 103 p.

When to Issue School Bonds. By Harold Florian Clark and Paul Royalty. Vol. II, No. 6, 1926. 16 p.

Students' Attitude Toward Examinations. By Grover T. Somers. Vol. III, No. 1, 1926. 48 p.

Proceedings of the High School Principals' Conference (November 12 and 13, 1926). Vol. III, No. 2, 1926. 27 p.

Index Numbers in School Administration. By Harold F. Clark. Vol. III, No. 3, 1927. 35 p.

Topical Analysis of 234 School Surveys. Compiled by the Bureau of Cooperative Research. Vol. III, No. 4, 1927. 111 p. (Supply exhausted.)

Proceedings of the Fourth Annual Conference on Elementary Supervision. Vol. III, No. 5, 1927. 64 p.

Proceedings of the Fourteenth Annual Conference on Educational Measurements. Vol. III, No. 6, 1927. 66 p.

Some Phases of the Junior College Movement. By I. Owen Foster, Harold F. Clark, Willard W. Patty, and Leo M. Chamberlain. Vol. IV, No. 1, 1927. 125 p. (Supply exhausted.)

Second Revision of the Bibliography of Educational Measurements. By Henry Lester Smith and Wendell William Wright. Vol. IV, No. 2, 1927. 251 p. (75¢)

Bibliography of School Buildings, Grounds, and Equipment, Part I. By Henry Lester Smith and Leo Martin Chamberlain. Vol. IV, No. 3, 1928. 326 p. (75¢)

Proceedings of the High School Principals' Conference (November 18 and 19, 1927). Vol. IV, No. 4, 1928. 54 p.

The Economic Effects of Education. By Harold F. Clark. Vol. IV, No. 5, 1928. 39 p.

Proceedings of the Fifteenth Annual Conference on Educational Measurements. Vol. IV, No. 6, 1928. 73 p.

Proceedings of the Fifth Annual Conference on Elementary Supervision. Vol. V, No. 1, 1928. 54 p.

Proceedings of the High School Principals' Conference (November 16 and 17, 1928). Vol. V, No. 2, 1928. 33 p.

The Development and Use of a Composite Achievement Test. By Wendell William Wright. Vol. V, No. 3, 1929. 90 p.

An Analysis of the Attitudes of American Educators and Others Toward a Program of Education for World Friendship and Understanding. By Henry Lester Smith and Leo Martin Chamberlain. Vol. V, No. 4, 1929. 109 p.

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